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INSULIN IN THE HANDS OF THE GENERAL PRACTITIONER.

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NEW ORLEANS.

The reaction of the profession to the use of insulin has, it seems to me, proceeded in general in two wrong directions. There has been naturally enough a fear of this potent agent. Its use was for a long while after its discovery restricted to specialists and repeated warnings have been given out that the careless administration was fraught with grave dangers. Then, too, most of the articles concerning insulin which have appeared have been directed chiefly to the narrow circle of men who have made a particular study of diabetes and the attempts to simplify the directions for diet and insulin have not been altogether successful and have often served still further to mystify the already puzzled practitioner. This attitude on the part of the profession is reflected in the survey I have made of the deaths from diabetes or from causes complicated with diabetes in New Orleans in 1923. Under the sanction and with the co-operaion of Dr. E. L. Leckert, president of the city Board of Health, (to whom my thanks are due) I wrote to each doctor signing such a certificate asking him to answer a brief questionnaire. There were 85 deaths from diabetes and from causes complicated by diabetes in New Orleans in 1923. Of these:

20 died in Charity Hospital.
3 died in Touro Infirmary.
3 died in Hotel Dieu.
1 died in the Presbyterian Hospital.
2 died in the Flint-Goodridge.
56 died in their homes.

Of the 56 deaths occurring outside the institutions, I was able to learn about 26. Of these 26, two were given insulin.

*Read before the Orleans Parish Medical Society, December 8th, 1924.

There has been, on the other hand, in many instances, I fear, a rashness and laxity in the use of insulin which must sooner or later cause fatalities. Even where fatalities do not occur these methods are bound to bring undeserved disrepute upon one of the greatest boons ever vouchsafed mankind and to cause patients to turn from it and place themselves in the hands of charlatans. From time to time reports are brought to me by patients of dreadful misapplications of insulin. For example, I have had one patient to whom insulin had been given three times a week, and another to whom it had been given once a week. In neither instance had there been the slightest attempt at a proper arrangement of the diet, or a proper relationship between the time of meals and the administration of the insulin. In both cases there had occurred with each dose of insulin the phenomena of insulin shock, true only the minor phenomena which fortunately disappeared promptly because food was soon taken. The insulin, in other words, made these patients sick each time and conferred no lasting benefit. The second patient was informed at each weekly injection that he was getting better and might look forward to a cure. Such conduct on the part of the doctor not only indicates ignorance of the crassest sort, but smacks strongly of quackery.

The number of diabetics in the United States has been estimated as high as one million. It is apparent at once that even if we assume a large error in this estimation it is impossible for the care of diabetics in general to fall entirely or chiefly into the hands of specialists. The profession at large cannot evade its responsibility for the care of diabetes any more than it can its responsibility for the care of tuberculosis. Doctors must learn some of the simple rules at least for the diet of their diabetic patients. The rules for the use of insulin are exceedingly simple, once one has mastered

the underlying principles of the diet, and if a doctor is qualified to care for a diabetic at all he is qualified to use insulin. The fundamental difficulty lies in the fact that the profession has failed to appreciate that:

1. Diabetes is a quantitative as well as a qualitative disease. Patients are able to care for food stuffs in varying degrees, proportionate to the impairment of their pancreatic (islet) function and the severity of their disease.

2. The diet for the diabetic must represent quantitative as well as qualitative restriction. Patients must be told WHAT and HOW MUCH they should eat. The directions should not be merely prohibitions.

3. Insulin is not a cure. Its action is fleeting, remaining only a few hours. It provides artificially what the diabetic patients lack for the utilization of their food. It must be administered every day, once at least, and in some cases two, three, and even four times.

My purpose in presenting this paper is to show:

First, that the handling of mild cases at any rate is not difficult nor complicated.

Second, that the plan for the rescue from diabetic coma may now be set in such standardized stereotyped terms that he who reads may learn to apply successfully.

To illustrate my first point, I wish to show the charts of two patients who have been treated entirely in my office and who have not been hospitalized one single day. They are examples of course, of a larger series. (Tables 1 and 2.)

Arbitrarily these patients are put on a diet for 24 hours of 100 grams carbohydrate, 50 grams protein, 50 grams fat to be divided into three meals. It is exceedingly easy for any doctor in a few minutes time to learn how to pick out from Joslin's card (Table 3) the foodstuffs which will make up these quantities. It is my custom, at first, to hand out to patients a list of foods with quantities worked out which will make up the quantities prescribed (Table 4.) The second and third days a diet of C. 50, P. 50, F. 50 is prescribed. If this does not suffice to bring the urine free of sugar it is judged necessary to use insulin. In order that we may determine whether this is the case, the patient is made to bring the urine every day,—all the urine collected in 24 hour quantities, not simply a specimen of one voiding. An initial examination of the blood for glucose content should be made to establish the diagnosis. The repetition of this examination during the course of the treatment is, of course, desirable and advantageous but it is by no means essential to the successful handling of a routine mild or moderately severe case in the hands of the general practitioner. The quantitative estimation of the urinary sugar is very easy and should be done because of the great assistance and information it affords, but even this might possibly be dispensed with and the doctor depend upon the rough estimation of the intensity of the qualitative Benedict reaction. He must, however, make the test with an aliquot sample of the 24-hour collection of urine.

If the urine becomes sugar free without insulin upon the preliminary diets we proceed to add gradually to these diets until a maintenance diet for the given patient is reached. This diet is based upon the average weight of persons of the same sex, age and height of the patient.* Ten per cent is deducted from this weight. The maintenance diet should furnish 2-3 to 1 gram of protein per kilogram (2.2 lbs.) and 30 calories per kilogram. It should furnish, also, in my opinion, a minimum of 50 grams of carbohydrate. Wilder, in a recent paper, advocates a simple and, I believe, very practical and desirable rule: 1 gram carbohydrate, 1 gram protein, and 2.5 grams fat per kilogram.

If sugar reappears in the urine before this diet is reached insulin must be employed to permit the patient to utilize this amount of foodstuffs. When it has been determined that the patient should be given insulin we have him come to the office in the morning before breakfast for his hypodermic for the first five or six times. We teach him during this time how to administer the insulin to himself, how to care for his syringe, how to make a qualitative test of the urine for sugar, and how to calculate his diet. He is drilled, too, in the phenomena of insulin overdosage, and how to combat them. We begin on the first day with two units of insulin and add gradually two units at a time until the glycosuria is entirely controlled. In general we may expect one unit of insulin to care for from two to four grams of urinary sugar. We now permit the patient to make semi-weekly, then weekly, then bi-weekly visits, finally discharging him with instructions to report once monthly, then finally every few months. All patients are instructed to file with us a weekly report (Table 4) giving details of diet, insulin, result of Benedict

*Tables of these weights are published by Thos. Groome & Son upon a card.

Table No. 1.

No. 1. Name, Frank M—. Hospital Age: 61. No. 2381. Net Height, 5 feet 10 inches. Net Weight 127 lbs.

Date 1924 October	Vol. C. C.	Sp. Gr.	Reac.	Acetone	Di-acetic Acid	Sugar in Urine Reduction Per Cent.	——Diet in Grams—— Carbohydrate	Protein	Fat	Calories	Naked Weight Pounds	Blood Sugar Mgs. per 100cc.	Insulin Units Order Given	Remarks.
2	1960	1030	AC	+++	++	10%	..	..	...	....	.....	...	.	Urine: Yeast cells, many mucus and urates.
3	2033	1036	AC	+++	+	10%	92	49	50	1014	.....	266	.	Blood: Hemoglobin 90 %. No abnormal cells found in smears.
4	2330	1020	AC	+++	—	10%	68	51	48	912	.....	211	.	Wasserman: Negative
5	2770	1010	AC	+++	—	8%	48	49	48	824	.....	...	.	
6	2540	1024	AC	++++	+	6.5%	48	49	48	824	.....	...	.	
7	2000	1008	AC	F.Tr.	—	0.67%	50	48	84	1188	.....	...	4	
8	2600	1010	AC	++	—	1.4%	50	48	103	1319	.....	...	5	
9	3000	1006	AC	—	—	Tr.	60	50	100	1340	.....	...	7	
10	3450	1010	AC	+	—	Tr.	60	50	120	1520	.....	...	6	
11	2360	1008	AC	F.Tr.	—	—	60	50	120	1520	127½	...	6	
12	3180	1006	AC	—	—	—	60	50	120	1520	.....	...	5	
13	2150	1010	AC	+	—	—	60	50	120	1520	.....	...	5	
14	....	....	..	..	..	....	60	50	145	1745	.....	235	5	
15-16	2850	....	..	..	..	—	60	50	145	1745	124½	200*	7	

Rx C. 60. P. 50. F. 145 Insulin, 7 units.

test, (expressed red, yellow, green, blue) and the body weight. I show also a sample diet with the details of its calculation (Table 5).

I direct your attention now to an even more important function devolving upon the general practitioner, namely the rescue of a patient from coma or impending coma. A specialist is not always at hand, nor may it be always feasible to transport the patient to a hospital (though this latter, in my opinion, is very desirable). For the sake of brevity I confine myself here to a bare statement of the indications for treatment and an outline of instructions.

The cause of the coma is the acidosis, that is to say, the impairment of the alkali reserve of the blood by the ketone bodies. These ketone bodies are produced by the incomplete combustion of protein and fat, which incomplete combustion is brought about by the inability of the diabetic to burn carbohydrate (glucose). The protein and fat may be compared to the coal, the carbohydrate to the kindling, the ketone bodies to the smoke. When the kindling does not burn because of lack of proper draft the coal is incompletely burned and smoke is produced. Insulin is the draft and when it is provided the kindling (carbohydrate) burns with a roar and the coal (protein and fat) is entirely consumed and no smoke (ketone) is produced; in fact, any previously existing smoke is consumed.

In addition to the impairment of the alkali reserve these patients are desiccated. They resemble in many respects patients suffering from shock. The surface is cold and dry. The respiration is rapid and "pumping." The tongue is dry, parched, and fiery red. For such a patient the indications are to furnish: 1. Heat. 2. Fluids. 3. Insulin. 4. Carbohydrate to be burnt by the insulin. I have not found it necessary to use soda either by mouth or by vein. I have rarely had to use digitalis as advocated by some.

The instructions which I have come to use in almost stereotyped fashion are these:

1. Hot water bottles. Keep patients warm.
2. Hypodermoclysis, normal saline, 1,000 cc.
3. Proctoclysis—warm tap water constantly.
4. Warm drinks. Tea, coffee, water, 4 ounces every hour.
5. Carbohydrates, 10 grams every 4 hours equal to oatmeal 5 tablespoons, or orange juice 3 ounces, alternating.

Insulin before each feeding, every 4 hours:
20 units if Benedict test is red.
15 units if Benedict test is yellow.
10 units if Benedict test is green.
0 units if Benedict test is blue.

In completely established coma the initial dose of insulin would be fifty units. If I had no facility for the determination of the blood sugar level I would buffer this by giving glucose intravenously, say 1-2

Table No. 1A.

No. 2. Name, Mr. Frank M—. Age: 61. No. 2381.

Date 1924	Vol. C. C.	Sugar in Urine Reduction Per cent	Diet in Grams: Carbohydrate	Protein	Fat	Calories	Naked Weight Pounds	Insulin Units Order Given	Insulin Units Time Given	REMARKS
October									7	
17 & 18	2375	Tr.	60	50	145	1745	...	7	0	
									0	
									7	
19 & 20	2375	—	60	50	145	1745	...	7	0	Rx: C. 60. P. 50. F. 180.
									0	Insulin: 10 units.
									7	
21	2375	Tr.	60	50	145	1745	126	7	0	No more cramps. Weak
									0	spells over.
	2000								10	
22 to 24	to	—	60	55	185	....	129	10	0	Feels fine.
	2500								0	
									6	
24 to 27	2500	—	*70	55	185	....	130	6	0	*Insulin symptoms Oct. 25,
									0	26, 27. Relieved imme-
									6	diately by orange juice,
Oct.-Nov.										3 oz.
27 to 4	2500	—	70	55	185	....	129½	6	0	
									0	
									6	
November										
4 to 18	....	—	70	55	185	....	131	6	0	Could not feel better. No
									0	more symptoms.

Table No. 2.

No. 1. Name, Mrs. G. H—. Age: 54. Net Height, 5 feet 2 inches. Net Weight, 150 1-2 lbs. No. 2412.

Date 1924	Vol. C. C.	Sp. Gr.	Reac.	Alb.	Indican	Acetone	Diacetic Acid	Reduction Per cent.	Carbohydrate	Protein	Fat	Calories	Naked Weight Pounds	Blood Sugar Mgs. per 100 cc.	Insulin Units Order Given	Remarks.
October																
20	660	1040	AC	F.Tr.	—	+++	—	20%	92	49	50	1014	150½	...	.	Blood: Hemoglobin 90%. No abnormal cells found in cells.
21	840	1042	AC		—	++++	—	10%	71	46	45	873	.....	...	6	10-21-24: Blood Wassermann: Negative.
22	860	1040	AC	—	—	++	—	7%	44	48	47	791	150¼	210	6	
23	1000	1022				+++	+	3.3%	46	45	79	1074	.....	185	6	
24	840	1028	AC			+++	Tr.	4%	50	49	80	1116	153½	...	10	
25	780	1020	AC			++	—	F.tr.	50	50	81	1129	.....	...	10	Rx. C. 50. P. 50. F. 80.
26	1300	1010	AC			+	—	v.f.Tr.	49	47	81	1113	.....	...	10	
27	1000	1018	AC			+++	—	Tr.	49	50	101	1305	.....	...	10	
28	1100	1014	AC			+	—	—	50	50	97	1273	.....	...	10	Pruritus much less. Feels better. No thirst.
29	1091	1020	AC			++	—	—	48	52	94	1246	153	...	10	Rx. C. 50. P. 50. F. 100.
30	1180	1008	AC			+	—	—	50	50	120	1480	.....	...	10	
31																
November																
1	....	....	..			.....	..	..	50	50	120	1480	.....	...	10	
2	1150	1021	AC			++	—	—	50	50	120	1480	.....	...	10	Feeling fine. Plenty of pep. No pruritus. Rx. C. 50. P. 50. F. 120.

Table 3.

30 Grams 1 Ounce. Contain Approximately.	Carbohydrates G.	Protein G.	Fat G.	Calories
Oatmeal, dry weight	20	5	2	118
Shredded Wheat	23	3	0	104
Uneeda Biscuits, two	10	1	1	53
Cream, 40 per cent.	1	1	12	116
Cream, 20 per cent.	1	1	6	62
Milk	1.5	1	1	19
Brazil Nuts	2	5	20	208
Oysters, six	4	6	1	49
Meat (cooked lean)	0	8	5	77
Chicken (cooked lean)	0	8	3	59
Bacon	0	5	15	155
Cheese	0	8	11	131
Egg (one)	0	6	6	78
Vegetables, 5 per cent. group	1	0.5	0	6
Vegetables, 10 per cent. group	2	0.5	0	10
Potato	6	1	0	28
Bread	18	3	0	84
Butter	0	0	25	225
Oil	0	0	30	270
Fish, cod haddock (cooked)	0	6	0	24
Broth	0	0.7	0	3

gram for each unit of insulin. While I prefer not to give the intravenous glucose, I wish to stress the fact that we are combating the acidosis, not the hyperglycemia. The excess of kindling cuts no figure. What we aim to do is to cause a bright blaze with adequate kindling; if some remains unburnt this is not of prime importance for the time being. We must, however, be sure that adequate kindling (glucose) is present. If our excessive draught (insulin) causes the combustion of all or nearly all the kindling (glucose) our patient runs the grave risk of insulin coma.

When the patient has been rescued from the coma and is without evidence of acidosis for forty-eight hours we begin gradually to bring him to a maintenance diet and with proper insulin dosage. This is done by the successive steps of: (1) dividing the 60 grams of carbohydrate (10 grams every 4 hours—10x6 in 24 hours) hitherto given, into three meals instead of six meals and similiarly dividing the twenty-hour insulin dosage into 3 doses instead of 6 doses; (2) adding daily 5-10 grams of protein and 20-30 grams of fat until the maintenance diet is reached, and (3) adjusting the daily insulin dosage up or down as indicated.

Table No. 4.

Sample Weekly Report.
Name.

Date.	Diet.	Urine.	Insulin.	Weight.
11-2-24	50-50-100	Blue	6-0-6	127 lbs.
11-3-24	50-50-100	Green	6-0-6	127 lbs.
11-4-24	50-50-100	Blue	6-0-6	.....
11-5-24	50-50-100	Blue	6-0-6	128 lbs.
11-6-24	50-50-100	Green	6-0-6	128 lbs.
11-7-24	50-50-100	Blue	6-0-6	.....
11-8-24	50-50-100	Blue	6-0-6	129 lbs.

Table No. 5.

Sample Diet.
C. 100, P. 50, F. 50.

	C.	P.	F.
Oatmeal, 1 ounce dry weight	20	5	2
Potato, 4 ounces	24	4	0
Orange, 2	20	0	0
Milk, 8 ounces	12	8	8
5% vegetables, 16 ounces	16	8	0
Meat, 3 ounces	0	24	15
Butter, 1 ounce	0	0	25
	92	49	50

DISCUSSION

Dr. F. W. Parham: In getting these patients to co-operate—some of them are rather an ignorant class, not always people of intelligence—how do you go about teaching them, so as to approximate the proper amount of calories?

Dr. J. A. Devron: I saw a discussion of insulin in a magazine sometime ago where the doctor said it was dangerous to let the patients make their own urinalysis. In one or two cases they found sugar in the urine and he believed they became comatose from the insulin. The blood sugar was found to be 50-60 instead of 80-124 mg. per 100 cc. Have you had similar cases where the urine would show sugar and the blood sugar was very low?

Dr. I. I. Lemann (in conclusion): I must confess myself very much disappointed. I had hoped that there might be some questions asked. I have felt the responsibility very keenly, since the Rockefeller money was given for the spreading of knowledge, in trying to get such lessons in such terms that others can understand. While we have had two or three physicians come for instructions, we have had a mere handful of the local profession. Once or twice I have spoken before local doctors and this present attempt was made to stimulate discussion. As Dr. Guthrie has stated, it has been his endeavor and mine to avoid technicalities. We have tried to extract the essentials from what we have been able to read of the experiences of others in different places and our own experiences here, and boil these down to terms understandable to the man

who is not a specialist in diabetes. That is the reason I desire to bring to your attention directions covering diabetic coma, which is an emergency necessitating immediate action; one cannot stop to find out who can help him; he may be in such a place that he cannot get anybody. I think it is necessary then to put these instructions in terms other than blood sugar, because blood sugar examinations are not always available; they are technical and difficult. One must, therefore, depend largely upon urine sugar. It is necessary to have urine tests made of the twenty-four hour collection. That is a point the importance of which I wish to stress: get samples for twenty-four hours, not a sample of one voiding. Repeated experiences show sugar in the afternoon and none in the morning, and if one trusts to a single specimen and the finding are negative he might be misled. I think one might even depend upon the intensity of a qualitative Benedict test, and I would much rather that the patient would be in the hands of a doctor who would insist on the twenty-four hour specimens and not depend on the quantitative estimation of sugar in one single voiding.

Answering Dr. Devron's question. There have been some men who have preferred not to keep their patient's urine entirely free of sugar, more particularly in the case of children. Glyelin, of New York, who has done a great deal of work in diabetes of children is in the habit of permitting them to run a little sugar. The consensus of opinion, however, is that adult patients, and children, too, are better off if you keep their urine free of sugar. On the other hand, we must keep them free of symptoms of insulin shock. This is usually easily done—only in a few cases have we experienced any difficulty. One is a case that Dr. Guthrie is watching at the Charity Hospital; the other our prize patient (the first patient with insulin) who has had a remarkable career. On a certain diet with a given amount of insulin she will run quite a bit of sugar; if we attempt to increase the insulin she has insulin shock, so we are having trouble on the one hand keeping her urine free from sugar, and avoiding insulin shock on the other.

The point Dr. Devron has brought out is of frequent occurrence. I tried to show this on the screen. After the pancreas has had a rest with the crutch of the insulin, it begins to pick up and furnish its own insulin to a certain extent. Some patients improve to such an extent that insulin may be discontinued and the patient still be able to take a maintenance diet.

In answer to Dr. Parham's question. We classify our patients into:

(a) People who have sufficient intelligence to weigh their food. This is a great advantage; eventually some do not have to use the scale for they train themselves to recognize by measure the size of a given weight. Even these patients, however, I instruct to weigh their food periodically so as to keep it standard.

(b) Patients who have neither the intelligence to weigh, nor the patience, but have the intelligence to calculate diet by measure rather than weight. Instead of giving them directions in terms of weight, we prescribe so many tablespoonsful of oatmeal; so many of milk; such a proportion of meat; a teaspoonful of butter, etc.

(c) People who are so ignorant that we cannot teach them to calculate. In this class we have an exact list of what they may have—for instance: your breakfast is so and so—an egg, an orange—just that and no more, no less. They may not vary that breakfast. Similarly the other meals are given in detail and no variation is permitted.

The third class, as Dr. Guthrie has stated, is surprisingly small. Dr. Guthrie has a wonderful clinic. With the assistance of the clinic secretary, who is a remarkable teacher, even the most ignorant negro is instructed how to regulate his diet in some way.

THE OLD AGE PROBLEM.*

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It is the desire of every normal man to live as long as possible. How to prolong life, the "Old Age Problem," is not a new question. It is as old as Father Time and it will continue to be a question long after we are gone. The period of human life has been divided by physiologists into Infancy, Childhood, Youth, Maturity, and Old Age. Normally the first signs of old age begin about the age of 50.

I. Old Age—Defined.—"Old age is that period of life in which the degenerative changes, that set in after maturity, become apparent." This does not correspond to any definite term of years, but is hastened by want, confinement, hardship, mental anxiety, exposure, bad habits, accidents, and disease. Some people may be old at 40 and some young at 70.

Is old age a disease?—One authority says that "old age is a chronic progressive disease, caused by sedementery deposits in the vascular system, elasticity giving place to inelasticity, which finally affects the entire body." In other words according to this authority senility is synonomous with arterio-sclerosis,—" a man is as old as his arteries."

Sir Victor Horsley says that "Old age is a disease, due to a degeneration of the thyroid gland which governs the whole circullatory system, causing symptoms synonomous with chronic myxoedema."

Dr. Lorand, in his "Old Age Deferred," says, "Old age is a disease due to the degeneration of all the ductless glands, the thyroid, adrenals, and gonads in particular" Thus the expression, "a woman is as old as her ovaries."

Dr. Metschnikoff, of Pasteur Institute, Paris, says, "Old age is a disease of autointoxication, due to intestinal putrefaction

*Read before the Delta Medical Society, Greenwood, Miss., Oct. 27, 1924.

in an alkaline medium," and to avoid this he recommends sour milk, on the theory that the lactic acid would inhibit the growth of old age producing bacteria—thus the expression "butter milk is the antidote to old age." He attributes the longevity of the people of Bulgaria to the use of "Yoghurt," sour milk, produced by the action of the Bulgarian bacillus. I might say, in passing, that the doctor, himself died at the age of 72, using his own remedy.

If old age is a disease, then is it a vascular disease primarily, or is it a glandular disease, or is it a toxemia of bacterial origin?

In the International List of Diseases causing death, Old Age is not given, but is listed as an undesirable and indefinite term, and not acceptable. Yet Senility, or Old Age, is given as the cause of death, in the majority of deaths after 70. The cause of death should have been stated as "Unknown."

Dr. Nascher of New York, says "Old age is not a disease, but a physiologic entity like childhood."

Dr. Thewlis's book on Geriatrics is based entirely on this principle, that it is "a physiologic entity and not a pathologic state of maturity."

Then we conclude that old age is not a disease, but a normal condition occurring in every form of animal and vegetable life, which cannot be prevented, but may be deferred, if we will.

In the human body, which is a wonderful machine, made in duplicate, on account of the "wear and tear and depreciation and other factors to be considered later, certain anatomic and physiologic changes occur in every organ and tissue of the body, called senile degenerations. The main change is a waste of tissue which is never restored, or if it is, it is replaced by one of a lower order, fibrous instead of cellular. Brain and nervous tissue are not regenerated. Inactive muscles undergo fatty degeneration, and atrophy. All the arteries undergo atheromatous and calcareous degeneration. In bony structure, the organic matter wastes away, leaving an excess of mineral matter, the bones become more brittle and lighter. All the organs atrophy, and their functions are impaired, except the prostate, which hypertrophies, and the heart, which nearly always hypertrophies, sometimes however undergoing brown atrophy.

The circulation is maintained with difficulty, due to the hardened arteries. The failure of the heart to properly pump the blood to all parts o the body, lessens the nutrition, thus supplied.

With advancing age the mental faculties are weakened, memory being the first to suffer. The ductless glands take part in this degeneration but not simultaneously. The thymus completes its growth at the third year, the pineal shows its chief activity during childhood, and at puberty both glands atrophy. The gonads become active at this time, and the thyroid seems to take on new life. They continue active till the menapause in woman and about the age of 50 in man, when these glands with all others show signs of degeneration. Normally the ductless glands act in harmony, but if one degenerates more rapidly than the others, the balance is disarranged, and we have the various symptoms that arise from hypersecretion of one gland, and the hyposecretion of another. The manifestations of glandular deficiency then appear,—the falling hair, dropping teeth, dry wrinkled skin, low temperature, dimness of vision, diminution of perspiration, indigestion, obesity followed by emaciation, and reduced metabolism, arcus senilis, and tortuous temporals.

II. Old Age Diseases.—Old people have an acquired immunity to most diseases of the acute infectious type. However pneumonia and influenza are very fatal to the aged, and erysipelas is very common. The most common diseases are the degenerative diseases, in order of their frequency, Cancer, Cardio-vascular renal diseases, with the accompanying arterio-sclerosis and hypertension, Nervous diseases, as senile dementia, and the diseases of metabolism, gout, diebetes, and obesity. Properly speaking, arteriosclerosis and hypertension are not diseases but symptoms or effects. The symptoms generally attributed to arteriosclerosis are usually due to nephritis, senile arteriosclerosis producing no symptoms. When an old person dies we are apt to attribute his death to arteriosclerosis, which is no better term than senility, or old age, unless it is premature and due to syphilis, alcohol, the infections, or chronic intoxications of mid-life.

Benign hypertension nearly always means beginning chronic interstitial nephritis, and malignant hypertension means the same more advanced, with the secondary cardiac involvement, enlargement, and myocardial degeneration. Where the primary lesion is, has always been a de-

batable question. Charcot says it is nearly always the kidney, furnishing the peripheral resistance, then the hardened arteries, lacking elasticity, causing the heart to pump harder, and hypertrophying, increasing systolic pressure, the accentuation of the second aortic sound, finally dilatation, failing compensation, or an accidental hemorrhage, or uremia and death.

Rheumatism in the aged is nearly always not rheumatism, but pains due to nephritis or intestinal toxemia. Gout and diabetes are nearly always accompanied with, or associated with nephritis. All diseases in the aged run a very chronic course.

In the treatment of the aged, the patient should be treated more than the disease. As inactivity predisposes to toxemia, Exercise, getting the patient up out of bed, is of the utmost importance. It encouarges them to fight, and the psychic element is all-important. "Encouragement, and showing the patient a great deal of attention, and taking time to talk to him about things that interest him have a better effect than medicine" is the opinion of Dr. Thewlis of New York.

III. Old Age—Deferred.—Old age then is inevitable, but it can de deferred, perhaps 10 to 20 years. The Life Extension Institute which was organized for the sole purpose of adding length to human life, and which has the endorsement of the leading life insurance companies, and the medical profession, has prepared a chart, which shows that life expectancy at birth is 55, the medium age in the U. S. today is 63, while the traditional, or Biblical span is three score and ten. Modern science, physical and mental, is slowly, but surely extending our span of life, having been increased in two centuries about 20 years. If you live to be 50, the chances are that you will live to be over 70. There are in the U. S. today 108 million people, but only 4 per cent of them are over 65. Only 19 persons in every 1000, born alive, reach the age of 90. There are 4267 centenarians in the U. S. today.

The Milbank Fund of $9,000,000 is an endowment to experiment, with a view of adding a score of years to the average life. The American Public Health Association has dedicated itself to the same task. Dr. Geo. L. Meighan of Columbia University says "if a man reaches the age of 20 in sound health, there is no excuse, barring accidents, for not living to be 80."

The most prominent factor in longevity is *heredity.* This has recently been clearly shown to be true by statistics gathered by Dr. Raymond Pearl of Johns Hopkins. Osler says "Longevity is a vascular question, and depends in the first place upon the quality of the vital rubber, we inherit, and secondly upon the wear and tear to which we subject it."

Obedience to God and His laws is of prime importance in the prolongation of life. God made us for a definite purpose, and I believe, with Dr. Lorand that "Each creature, man or animal, is destined to work; and if we follow God's laws and do good, human life will be prolonged and premature death prevented." Soloman says "My son, forget not my law; but let thine heart keep my commandments: For length of days and long life, and peace, shall they add to thee. "(Prov. 3:1-2). Statistics show that the hardest workers in all lines of endeavor are the longest lived. "Work never hurts; it is worry that kills." How does worry kill? It is through the sub-conscious mind, which is the connecting link between the body and the mind. We all know that the "subconscious is amenable to control by suggestion, and is greatly influenced by emotion." Joyful emotions invigorate, and sorrowful emotions depress. Our bodies are made for"courage, confidence, and cheer, and not for fear, distrust, and gloom." Dr. Sadler tells of an ex-convict with a blood pressure of 190, who was constantly worrying over being re-arrested. On being assured on this point, his blood pressure began to drop, and in three hours it was 170, and the next day it was 150. We all know the effect of anger on blood pressure, in fact, sometimes causing sudden death, in the arterio-sclerotic individual, from the sudden rise. Crile states that "Emotion, energy, and excitement raise the blood pressure by causing a hypersecretion of the supra-renals, but if this stimulation persists there will be an ultimate tire and insufficiency of secretion, causing weakness and debility." Mind, then we see is a factor in longevity, that cannot be disputed. A fixed determination to live, the will, is the third link in the chain. When we lose courage and faith we grow old, and the old adage is true, "We are as old as we think we are." Chauncey Depew, who recently celebrated his 90th birthday, is still active in the business world as president of the Board of Directors of the N. Y. Central, and is at his office at 9 every morning. He says that "My grand father

died of worry, and my father died of worry, and I was dying of worry, when I decided to take up humor, to see the genial side of life. And I found that the mind controls the body." He attributes his long life to cultivating the spirit of optimism. "Pack up your troubles and smile, smile smile."

Soloman again says "A merry heart doeth good like a medicine, but a broken spirit drieth the bones."

The fourth factor in deferring old age is habit. Man is by nature a creature of habit. We should early form regular habits as to work, rest, and recreation. Natural death is doubtful. Seneca says "Man does not die, he kills himself." The ten life shortening habits as given by Dr. Lorand are Alcohol, Over-eating, Tobacco, Sexual Indiscretion, Uncleanliness, Ambition, Avarice, Anger, Vanity, and Avoidance of parenthood. The simple life is a long one, the strenuous, or complex life is a short one. Moderation in all things is said to be the key to health, and it is true that "Moderation and persistence travel life's road hand in hand."

Personal hygiene, as to fresh air, exercise, diet, daily baths, and bowel movement mean more than do drugs.

The Chicago Board of Health says "Modern life is too swift; therefore the essential things to do in prolongation of life is to cut down the speed." The Six Rules to Longevity as given by another Health Board are as follows: "Eat enough, but not too much. Play enough, but not too much. Sleep enough, but not too much. Work as hard as you please. Don't work when you should be sleeping, playing, or eating; and sixth, Don't worry." Dr. Fiske of the Life Extension Institute says "the problem of lengthening life involves the conquest of these factors: Heredity; Infection, actute and chronic; Poison, from within and without, as drugs, occupational, and endocrine disturbances; Food Deficiencies; Food excess; Air defects; Hormone Deficiency; Injury; Psychic trauma as fear, grief, and emotional excess, which is more destructive than mental effort; Lack of exercise; Psychic Apathy, as the lack of interest in life, giving up." He advises "as of first importance a complete physical examination at least once a year, to take, as it were, an inventory of physical assets, to find out if there are any defects and advise how best to correct them."

IV. Rejuvenation.—When we get old, can we be young again? The subject of rejuvenation is always a popular subject. If old age is a disease due to degeneration of the thyroid, as advocated by Sir Victor Horsley, feed the aged thyroid and they will be young again. Or if due to the degeneration of all the ductless glands as stated by Dr. Arnold Lorand the hormones of all the glands would be indicated. If due to autointoxication by intestinal putrefaction as stated by Prof. Metschnikoff the treatment would be, *elimination*, and changing the intestinal flora, by drinking sour milk. There have been various methods advocated for rejuvenation, the physical, surgical, organotherapy, drugs, Ultra-violet ray, heliotherapy, X-ray, and Radium baths and mud baths.

Physical. Rejuvenation of those who are prematurely old due to disease or habit is possible, of course, and has been proven; but in the aged we can only hope to "Restore the *diseased organ or tissue* to the state normal in senility." Sanford Bennett, a retired business man of San Francisco, at the age of 50, broken in health, of tubercular and short lived parentage, claims that, by a system of exercises taken every morning flat of his back in bed, with the windows wide open, to have been completely rejuvenated, and at the age of 70, was a young man again in every respect. His recipe is "Moderate exercise of every muscle, alternate contraction and relaxation, in the open, with special attention to personal hygiene."

Surgical. Dr. Steinach's operations for rejuvenation have been given wide publicity by the lay press. The two methods used by him and his followers are, first, a simple ligation, under local anaesthesia, of the Vas Deferens, and the other, Transplantation in the old, of gonads, (the ovaries or testicles as the case may be) of young animals. Dr. William T. Belfield of Chicago in a recent issue of the Journal A. M. A. on "Some phases of Rejuvenation," says Dr. Steinach's method merits little attention, as it is founded on error, and refuted by experience."

Organotherapy was advocated first in rejuvenation by Brown-Sequard in 1889. He reported wonderful results upon himself and his patients from the injection of testicular secretion. Immediately, there sprang up factories all over the land, manufacturing Brown-Sequard's Elixir of Life? They worked day and night to supply the demand from many, many old men, ambitious to be young again. But alas! at Shamoken Pa., ten

deaths were reported following the treatment, and Rejuvenation received its "black eye." Dr. Thewlis says, Organotherapy in old age is a valuable weapon in combating diseased conditions, and preventing many senile degenerations," but in his book on Geriatrics, he does not mention the subject of rejuvenation.

Drugs. Arsenic has long had a reputation as a rejuvenator, as well as the Iodides, Iron, Phosphorus, and Strychnine, and others, but these drugs are only indicated in diseased conditions, not in normal senility.

Ultra-Violet Rays from the sun and the Quartz light, the X-ray, and Radium baths and mud baths all have their advocates as great rejuvenators. As old age, as stated, is a normal process of degeneration and atrophy of all organs and tissues, and glands, rejuvenation, except in disease causing premature senility, is against reason, against nature, and against God's plan of life. "No man putteth new wine in old bottles, the new wine would burst the bottles and the wine would be spilled. No man also seweth a piece of new cloth on an old garment?" It would seem secure at first, but the first use of the garment would make the rent worse. (Mark 2-21,22). There are many cases of extreme longevity, the most authentic, that of Thos. Parr, who lived 152 years. The account as given by the Philosophical Transactions of the Royal Society of London, of his death, and autopsy made by Dr. Harvey, is "He died after he had outlived nine princes, in the 10th year of the 10th of them, at the age of 152 years and 9 months "The immediate cause of death was attributed to the change of food and air and habits of life, as he was brought from Shropshire to London, where he was fed high and drunk plentifully of the best wines. Perfect condition of all organs and tissues was found at autopsy.

Then in conclusion our object should be, for ourselves and our patients, "To grow old gracefully" as expressed by Oliver Wendell Holmes, who was like Chauncey Depew, an optimist, and his whole life was lived, unselfishly, trying to make the world a better place in which to live.

Gladstone lived the simple life. He had the habit of walking a great deal after he was 70, and died in active life at 89. It was said of him that "He was the most collossal character on the globe." Dr. Abraham Jacobi was in active practice past the age of 87. Dr. Stephen Smith died recently at 99. Dr. W. W. Keen completed his system of Surgery after he was 70.

When should we stop work and retire? "Only when unable to perform." Keep the body and mind occupied, and "remain in harness" till the end.

Some one has said that "The will to work is the will to live" and that,

> "Life's battles do not always go
> To the older or younger man:
> But soon or late the man who wins
> Is the man who thinks he can."

Addenda and Explanation.—Life Extension Institute Plan as outlined by its founder, Harold A. Ley of Springfield, Mass., Dr Eugene Lyman Fisk as medical director, Prof. Irving Fisher of New Haven, chairman of the Hygiene reference board with such members as Surgeon-Generals Blue and Braisted retired, and Major-General M. W. Ireland of the Army, Rear-Admiral Stitt of the Navy, Dr. Goldwater of N. Y., Prof. Barker of Johns Hopkins, Dr. Haven Emerson of Columbia University, Prof. Mendel of Yale, Prof. Rosenau of Harvard and others of equal importance, —the plan—"We begin by making a complete and thorough survey of the entire body, and we follow this by periodical examinations. No member of our staff is permitted to give professional treatment to our clients, nor to recommend any one to so do. We find out what is wrong, and advise how best to correct it. You might call it a form of health insurance."

Bibliography

1. Gould and Pyle: Cyclopedia of Medicine and Surgery—Scott.
2. Nascher's: Geriatrics, The Diseases of Old Age and Their Treatment.
3. Thewlis: Geriatrics.
4. Lorand: Old Age Deferred.
5. Lorand: Life Shortening Habits and Rejuvenation.
6. Bandler: The Endocrines.
7. Howell: Text-Book of Physiology.
8. Senescence: G. Stanley Hall.
9. Longevity: Pearl, Journal A. M. A. Jan. 26, 1924.
10. Some Phases of Rejuvenation: William T. Belfield, Journal A. M. A .4-19-24.
11. Old Age, Its Cause and Prevention, by Sanford Bennett.

THE MORE COMMON DERMATOSES DUE TO OCCUPATIONAL AND EXTERNAL IRRITANTS.*

M. T. VAN STUDDIFORD, M. D.
NEW ORLEANS.

The inflammations of the skin resulting from the action of a mechanical, physical or chemical cause are known as artificial dermatoses.

Each class is interesting and worthy of our study, but we must limit our discussion: first, to the dermatoses of external origin; and secondly, to those due to, or thought to be due to, chemical causes, thus omitting internal medicaments, auto-toxic substances and narrowing our discussion to external dermatoses called by Professor Darier, external toxidermas.

In this interesting group of toxidermas, one can only attempt to show their relation as to location and treatment. As for their etiology each has a different causative substance and as for skin reaction to this substance each differs as to quantity and concentration of the agent, as to resistance of the individual and as to the duration of the action of the agent. The resistance may be either regional or congenital.

The same injurious substance may give rise in different cases to fundamentally dissimilar skin eruptions, in just such a manner as individuals react differently to certain drugs and as the same individual reacts differently at different times.

With any local skin reaction of any extent we should expect to find symptoms of fever, general malaise, nervousness or headache, while they are important especially in treating the condition for the comfort of the individual, yet in this discussion they are to be omitted.

In making mention of the phenomena known as hypersensitiveness which may be active or passive, congenital or acquired, aided by some predisposing agent or aided by any group of them. In simple words, it means that lowered condition of resistance until the minimum dose of toxin is effective.

Being interested more in the name of the injurious agent, location of the eruption and the treatment of the condition, than a long discourse on the chemical nature of the injurious substances, I have omitted all physical and chemical descriptions and formulas of these substances.

The dermatoses to be discussed will be those due to—The Rhus or oak family, the analin dye group namely, hair dyes, fur dyes, clothing and hat band dyes, match box or phosphorus sesquid sulfid poisoning only, mentioning the dermatose of barbers, candy and sugar workers, battery and electrical workers, druggists, petroleum and tar workers.

In Rhus dermatitis we have the Rhus toxicodemdron, Rhus radicans and Rhus diversiloba, commonly called poison ivy, poison vine and poison oak, and since the introduction of Mah Jongg, the Rhus Vernix, a small tree native of Japan, but active in this country in its by-product, the Japanese Commercial lacquer.

Capt. John Smith, as early as 1609, records for us brief description of Rhus dermatitis when he describes the affection of his men soon after their entrance to this land. He describes "A poisonous weed in the shape of English Ivy which when touched causes redness, itching and lastly blisters, which pass away without further harm."

In China, Japanese lacquer dermatitis was described as early as 605 A. D. and in Japan, as early as 923 A. D.

The toxin substance is generally agreed upon to be a non-volatile polyvalent phenol, called by Toyama urushinol, and by English and American authorities, as lobinol or toxicondendrol.

We must distinguish Rhus Dermatitis from other eczematous eruptions, produced by irritants and from ordinary idiopathic eczema.

The clinical features of Rhus Dermatitis (Venenata) produced by the plants of the Rhus group are:

Symptoms developed in the course of a few hours to a week after contact with the poisonous substances, on exposed surfaces of body, usually face, neck, hands, genitals. It attacks the hand and face most frequently, most easily where the skin is thinnest, and where the surface is most accessible. By contact from here to the neck and genitals it is carried by the hands with a more extensive dissemination as the case may be.

The lesions consist of an erythema followed by sago grain or miliary papules and vesicles sometimes becoming confluent to form blebs or bullae, accompanied by redness, heat and edematous swelling, itching and burning sensations. Pustules may

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arise from infected vesicles or weeping from denuded surfaces.

Idiopathic eczema is usually distinguished by a detailed history, less rapid development and a tendency to become subacute or chronic.

It is agreed that the most common error in therapy is the frequency with which a succession of mericants are used, each tending to spread the poison to other parts.

Toyama believes we should neutralize or destroy the poison with an alkali, weak nitric acid or sugar lead solution. His most trustworthy prescription is:

Caustic soda (potassium Hydrate) ...	1.0 gm.
Alcohol	30.0 c. c.
Glycerine	10.0 c. c.
Water .....100.0 c. c.	

This is rubbed over the affected area with a cotton pledget which neutralizes the toxin, and reveals it in its oxidized blackish state. The oxidized toxin is removed by a 1 per cent nitric acid in alcoholic solution on a cotton swab. The skin is then washed with soap and water and lead acetate 1 per cent solution applied.

In severe cases McNair used the Barthe de Sanforts (1914) paraffin treatment for burns. First applying a 5 per cent Ferric chlorid in 50 per cent Ethyl alcohol solution.

Ointments in any case are used only when the eczematous condition is encountered, being contra-indicated before the poisons are neutralized and removed, because they disseminate the poisons to other areas, causing them to become affected.

Frosst, of California, has used as a specific treatment for the poison oak or Rhus diversiloba, an alcoholic solution of the toxin of the plant. This he standardized by injections into Guinea pigs. For adults, he gave from 0.5 c.c. to 1.5 c.c. of the alcoholic standardized product intragluteally, repeated once daily from 2 to 3 doses. In children, he gave the solution by mouth, using 10 drops in aromatic elixir as the initial dose, increasing one drop each dose, giving three doses daily until 20 were reached, then one teaspoonful daily.

As a preventive, Schamberg of Philadelphia, uses for those sensitized to the poison oak toxin, an alcoholic solution or Tr. of Rhus Toxicodendron as follows:

Tr. Rhus Toxicodendron	1.0 c. c.
Rect. Spirits	5.0 c. c.
Syr. Orange q. s. .....100.0 c. c.	

M. Take three times daily in one-half glass of water from one drop, increasing each dose one drop, until 21 drops, then teaspoonful once daily through ivy season.

Locally, we might apply many other lotions or ointments, all highly recommended, but the above seems to meet good favor among authorities on Rhus Dermatitis.

Analin dyes—Besides the group of workers in manufacturing analin dyes and those using the dyes commercially in the textile mills, we have a class poisoned through the use of the dyes for cosmetic purposes, as in hair dyes, those poisoned by dyed furs and those of dyed clothing. When our lady wishes a more lasting dye than the vegetable dye, such as henna, she uses the analin hair dyes which she often carelessly applies or to which she is hypersensitive and skin reaction follows.

The patented hair dye might have as its base the salt of lead, mercury, bismuth or silver, usually it is phenylene diamine.

Sodium sulphite, pyrogallic acid or some oxidizing agent is used first and then the phenylene diamine is used, causing the hair to take on a light or dark color according to the length of application.

Individuals slightly sensitive to the dyes become so because of the process, which makes the skin pores more accessible and the failure properly to clean the dye off the skin after the application excites a dermatitis.

In each case the scalp or face is affected, the skin become erythematous with a feeling of intense burning, edema to the extent of closing both eyes, followed by a dermatitis, eczematous or exfoliative in character.

In dermatoses due to fur dyes, dyed clothing, dyed gloves or shoes, practically the same dyes are encountered, but the individual is usually hypersensitive to the analin group, while in hair dye dermatitis, the added oxidization and washing solutions furnish a factor for their production.

We also encounter a similar dermatitis in the beauty clays and bleaching lotions now in use.

W. Gilman Thompson, in the Medical Review for March 6, 1920, gives a very striking case history of Mrs. X, middle aged, vigorous, whose symptoms of poison lasted for more than two years. She was taken from England through France and lastly America, visiting noted practitioners in many places. She was treated for gout, weakened heart, fainting attacks and blurring of vision. One constant clinical symptom was a rash over face, neck, hands and occasionally other parts of body. Some-

times following vigorous physiotherapy, the dermatitis became universally distributed.

After two years of traveling from medical man to medical man, she came back to New York City, where Dr. Thompson, her family physician, was called and among the changes in his patient, he noted a change in the color of her hair. This led to a story of the use of the French Hair Dye which had precipitated the condition and which had maintained its acuteness. Prompt relief and recovery followed the withdrawal of the dye. The dye proved to be of the analin base and gave all the symptoms of analin poisoning, namely, vertigo, gastritis, diplopia, asthenia and exfoliative dermatitis.

The wise hair dresser today uses a test on eczematous or delicate skinned individuals. This consists of applying minute amount of the dye and washing solutions either on the temple or back of the ear and collodion dressing is applied over this for at least 12 hours.

Hy. C. Semon, in British Medical Journal for March 1923, gives us a brief resume on Dyed Fur Dermatitis when he says, "patients enter with etiology on their shoulders." The eruption is limited to shoulders, neck and chin. In prolonged cases lips and eyelids are also involved. The blotchy erythemia is limited at first to exposed surfaces, spreading, resulting in considerable edema and disfigurement. The latter cases show pronounced infiltration, tending to vesiculation and weeping with itching and burning.

Differential diagnosis is with seborrhea dermatitis. Location: absence of involvement of scalp, backs of ears, wings of nose, and between shoulder blades, with history of acute outbreak usually clears up the diagnosis.

Barbers often develop an analin dye dermatitis of the exfoliative type due to constant irritation of the hands by soaps and lotions and constant application of the dyes.

In match box dermatitis we are dealing with phosphorus sesquid sulfid as the poisonous agent. The matches or match box carried practically in contact with the tender skin surface, aided by irritation and warm weather, an erythematous papular eczema is produced. As one area becomes sore the matches are moved to another pocket with the same results.

I remember seeing a case where a lesion on each thigh and one under his shirt pocket marked the carrying places of the match box.

We must omit the dermatoses due to tar, petroleum, Bakers dermatitis etc., for want of space and time.

Summing up—We have to deal with individuals hypersensitive, either actively or passively, having a regional or congenital resistance, which may be affected by the concentration of several agents, predisposing the region to attack by a minimum dose. We have those who have previously been affected who are made more sensitive and react to very slight irritation.

A full history is invaluable in the group of dermatoses found on the exposed surfaces and with it one is often able to connect the outbreak of the eruption with the exposure to the toxic substance. In every instance, the treatment consists in removal of individual from exposure, neutralization and removal of the poisonous agent from the affected area.

In Rhus dermatitis this is done by application of alkalies—removal of oxidized toxin with 5 per cent nitric acid in ethyl alcohol solution.

Benzene, alcohol or cotton oil are fine removing or cleansing applications. Soothing lotions such as calimine zinc oxide lotion. Wet packs of 2-3 per cent borax or soda carbonate or ammonium muriate 1-3 grains to ounce.

As the acute erythema subsides ointments may be used in combatting the eczematous conditions such as 5 per cent corn starch and zinc oxide in white vaseline.

In treatment, keep in mind the fallacy of changing from one to another application, either spreading your toxin with each charge or not giving any of them sufficient time to be of use. Allow a good remedy time for results.

References:

Strickler—J. Cutan D.—1918, P. 329.
J. A.M.A.—1923, P. 1588.
Guy—Arch. Derm & S.—1922, P. 107.
Simon—British Med. J.—March 17, 1923.
Doerster—J. A.M.A.—81, 1923, P. 1188.
C. J. White—Cutan. Dis. 1916, P. 497.
O'Donavan—British M. J.—1922-, Pp. 2, 499, 504.
Toyama—J. Cut. D.—1918, P. 157.
Frosst.—Med. Record—1916-90, P. 1121.
Anderson—California State J. Med.—1920, P. 153.
J. A.M.A.—1923—80—1588.
Bunch—Practitioner—1916—97, P. 173.
Thompson—Medical Record—1920, Pp. 97, 401.
McNair—Rhus. D.

DISCUSSION

Dr. Henry Menage (New Orleans): If the title of the paper were to be discussed from all angles one could almost write a text-book. I do not propose to discuss the paper fully.

We dermatologists make a diagnosis of skin dis-

ease by devious routes, and we sometimes have to use the system of a Sherlock Holmes to arrive at a conclusion. Among the diseases that require that type of investigation are the occupational and external irritating diseases of the skin. What I want to emphasize is that in making a diagnosis of disease of the skin on exposed parts of the body we should get the history of the case, and among the facts to be brought out is the occupation of the individual. Occupation plays a big part in the etiology of diseases of the skin of all parts of the body.

DYSPHONIA, AS EXPRESSING DISEASE REMOTE FROM THE LARYNX.*

HOMER DUPUY, M. D.
NEW ORLEANS.

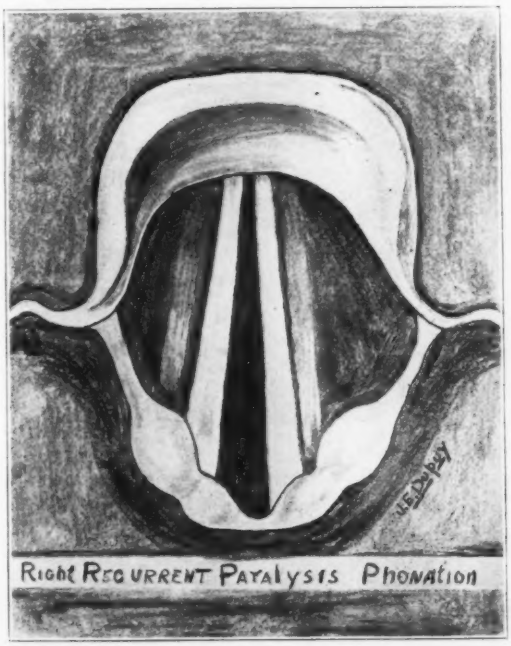
It is through dysphonia, hoarseness, that the larynx usually first tells the story of disease within its own borders. But it also not infrequently gives this same signal of distress in diseased conditions remote from its own structure. We purpose to limit our discussion only to chronic dysphonia associated with (1) Gumma of right lung. (2) Thyroid gland enlargement. (3) Aneurism of the aortic arch. The laryngeal involvement in these affections is not the result of any inflammatory changes within the larynx. The laryngoscope shows neither hyperemia, nor infiltration of these parts, it reveals some form of vocal cord paralysis. This lack of proper physiological vocal cord movement is caused by a disturbance in the neuro-muscular apparatus. It is brought about by pressure on the Recurrent Nerve, the chief motor supply nerve to the larynx. The left Recurrent is the longer nerve, originating from the left Pneumogastric just in front of the arch of the aorta. Owing to its length it is more frequently subjected to pressure. The Right Recurrent is given off from the right Pneumogastric at a point behind the right subclavian vessels. It is, therefore, a shorter nerve, and clinically it is extremely rare to find it isolatedly subjected to pressure. The following case report illustrates a right nerve involvement.

Case 1. White male, aged 40, presented marked hoarseness, intense coughing and loss of weight. Sputum negative for tuberculosis. No increased temperature. Despite the hoarseness, no laryngoscopic examination was instituted.

The patient went to the piney woods to recover from a supposed tubercular infection. He returned unimproved, and was for the first time referred to Dr. Joseph Danna at the Hotel Dieu. I was called in as consultant. The laryngoscope showed right vocal cord completely paralyzed. The larynx was otherwise normal. (picture 1). This meant pressure on right Recurrent Nerve. As nothing in the neck seemed to account for the pressure, we suspected a growth in right lung involving the apex, near which point the right Recurrent begins its upward course to the larynx. The patient could not be moved for an X-ray. A Wassermann gave positive findings. We had just begun antiluetic treatment when he began coughing up large quantities of pus. With this outpouring of pus the fatal end came quickly. Dr. Maurice Couret held a partial autopsy. An enormous broken down gumma had involved the right lung and had perforated the lower trachea.

Remarks: A more complete examination at the beginning of the patient's illness, including laryngoscopic aid to explain the hoarseness, would have saved a life. The laryngeal picture alone would have pointed to a pressure phenomenon. The rest could have been worked out. Moral: Only a laryngeal examination can give the right clue when searching for the cause of hoarseness.

Case 2. White female, aged 35. Came to the Throat Clinic, Charity Hospital, complaining of hoarseness. She presented a large adenomatous goitre. The left lobe was decidedly larger. Laryngoscope revealed paralysis of left vocal cord. The left enlarged thyroid lobe was evidently pressing on the Recurrent of that side. We advised her to seek operation at once so as to remove pressure on the nerve and thus help restore its function. Remarks: Both Recurrents in the region of the thyroid gland lie between the trachea and the oesophagus, but it is of practical importance to know that left Recurrent nerve is more superficial, not so deeply imbedded between the trachea and oesophagus. It is, therefore, anatomically more exposed to pressure in this situation. Thus,



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it is that the left Recurrent is more frequently implicated in thyroid enlargement. The recognition of such a paralysis has a practical bearing in restoring vocal function. Even in the absence of other urgent symptoms, if we would forestall atrophy of the laryngeal muscles we must quickly relieve pressure and restore innervation by a thyroidectomy. In the routine examination of patients with thyroid disease the practical use of the laryngoscope must be recognized.

DISCUSSION

Dr. G. Farrar Patton (New Orleans): During the first ten years of my practice I had a patient who was joint proprietor of a large foundry and machine shop. His business took him to places like the Yazoo delta and over into Arkansas, where he contracted malaria, and I was called to treat him for what appeared to be a severe case of occipital neuralgia. I did not succeed in relieving him, and he decided to go to Hot Springs, Ark., where he consulted a high-priced physician, took the baths, drank the waters and otherwise went through routine treatment, with but little, or no benefit. He then made a trip to England, and in London paid a three guinea fee to a leading nerve specialist, who, likewise, failed to relieve him. After his return home I was called one evening to prescribe for some slight ailment of one of his children and in talking to his wife about his case, was told by her that while rubbing his neck with St. Jacob's oil, she had noticed a swelling which beat just like his heart. Well, the secret was then out, and to use a familiar expression, "You could have knocked me down with a feather." That man had a well defined right subclavian aneurysm which any one of the doctors consulted ought to have discovered, and it had remained for his wife to find it and call attention to it. Under the administration of full doses of K. I. some relief was obtained, and the patient lived several years, during which, with the continued pressure exerted on the recurrent laryngal nerve, his voice became husky and toward the end was almost entirely lost.

I wrote a paper on that case, emphasizing my conviction that the progress of medical science depends, not alone on recording our little triumphs, but upon a full and honest confession of our shortcomings as well. That lesson has been valuable to me as showing the need of making a thorough and exhaustive examination in every case, rather than trust to superficial indications which, as in this instance, may prove absolutely misleading.

Dr. Oscar Dowling (New Orleans): I have enjoyed the paper. I might say that I was associated with Dr. Dupuy at one time in his professional career at the Ear, Nose and Throat Hospital, and his advancement in that line of work has been very gratifying to me.

I think we should all be impressed with the importance of thorough examination of the individual. I was in a southern parish in the office of a doctor there and saw him make a most thorough examination of the lungs and throat of a patient. When he had finished the patient asked what he owed, and the doctor said: "I will have to charge you three dollars, because I have taken a great deal of time for your examination." The patient handed him five dollars and said, "If you are willing to accept this bill in payment for your services I will be glad to pay it, for the reason that this is the first time I have had an examination that was satisfactory to me." I mention that to show you that people are willing to pay for services when they get them, and the doctors in the rural districts should keep up with what is new in medicine by going to post graduate schools. Some time ago a man consulted a dermatologist in New Orleans and they discovered that he had a distinct lesion of leprosy. This man had been examined by qualified physicians, but they did not undress him. That brings out the importance of what Doctor Patton mentioned—thorough examination of all patients.

Dr. Paul Michinard (New Orleans): It is hard for a gynecologist to speak on laryngeal troubles, but Doctor Dupuy mentioned something about mistakes having been made. I did not hear him mention some measure that might be adopted to avoid falling into such errors.

I had two patients with cough suggestive of some trouble in the recurrent laryngeal nerve, both men. I auscultated, and I think I have a pretty well trained ear, but I failed to hear a bruit. After that, being in doubt, I had four friends examine one of these men, but not one of us could find the characteristic bruit of an aneurysm. Neither was there the characteristic difference in the pulsation of the radical arteries, nor a difference in the blood pressure on either side. We thought we were wrong, and thought this man had incipient tuberculosis in addition to something pressing on the recurrent larngeal nerve, so we had Doctor Granger's assistant make a

fluoroscopic examination, and there was seen a pulsating aneurysm of the aorta. That man died of rupture of the aneurysm two weeks later.

Then I had another case. I did not take any chances on my ear, but had a fluoroscopic examination made, and there was an aneurysm which could be seen pulsating. Both of these cases were luetic. Now, when any person comes to me with any cardiac or pulmonary trouble I do not depend upon the ear, but send him for fluoroscopy and X-Ray. I have been reading up on aneurysms and I find that it is probable that in a large percentage of cases of aneurysm of the aorta the bruit cannot be heard, but the pulsation can be seen with the fluoroscope.

Dr. L. L. Cazenavette (New Orleans): The subject has been so well covered by Doctor Dupuy that there is really little to add. I rise, however, because the paper and the discussion have brought out the point of the involvement of the nerves of the larynx as coming from the recurrent laryngeal. From the standpoint of neurology we find that hoarseness is at times related to other conditions of the nervous system; diseases that affect the more central part of the nervous system. I have reference to cases of bulbar paralysis. Of course, under those circumstances, we have many other symptoms that might guide us in the diagnosis and location of the disease. But I see no reason why the laryngoscope should not prove its great usefulness in such cases.

Dr. Homer Dupuy (closing): Dr. Michinard is right. Pressure from aortic aneurysm may cause persistent coughing, but if pressure is sufficient to cause the coughing dysphonia will also be present, for this pressure will also involve the Recurrent laryngeal nerve as it passes under and behind the arch of the aorta. Certainly we can trust the laryngoscope for accurate information when hoarseness is present. It will almost unerringly tell us about those troubles having their origin within the larynx itself, and it may point to pathological changes in regions far removed from the larynx. Dr. Patton's report illustrates my contention, that dysphonia is not a disease, and as signal of trouble, it should be investigated by a proper and thorough laryngoscopic examination. Finally, I make a plea for the more frequent use of the laryngoscope in the study of disease.

FRACTURES OF THE BASE OF THE RADIUS: METHOD OF TREATMENT AND END RESULTS.*

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The recognition and treatment of fractures have engaged the attention of medical practitioners in all ages. The axioms formulated and used during the earlier days of surgery held sway until Bardenheuer, Lucas-Champeoniere, and Lane noted that in a large proportion of cases deformity and loss of function resulted from an application of commonly accepted axioms of treatment.

Statistics of industrial insurance commissions confirmed these observations.

The modern methods aim at (1) a "sufficiently perfect restoration of the form of the bone to allow of perfect joint action, (2) and the preservation of the full vitality of the circulation and the neuromuscular apparatus." In order to obtain the above results, a knowledge of each method of treatment is necessary and at times a combination of the good points in each is essential.

In reviewing 200 cases taken from the records of the Surgical Clinic of Touro Infirmary, some interesting facts seem worthy to note: The end results are not what they should be in some cases. This may be attributed to (1) inadequate diagnosis and (2), inadequate treatment. Both of these factors can and should be eliminated. The first (inadequate diagnosis) is the result of the traditional use of a term, Colles fracture which is loosely applied and leads many who use it to expect that all fractures of the base of the radius must present the same clinical picture; the so-called silver fork deformity.

If we are to obtain better results, we must be more accurate in our terminology and be more exact in our examination.

One should not send patients for X-ray examinations before the physicial examination has been made. If he does he will be disappointed because of the failure of the ray to show a fracture through an epiphyseal cartilage. Surgery should not be subservient to one of its hand-maids. Human reason must ever direct artificial or physical measures.

A properly taken history and a systematic examination, which consists of inspection, palpation, mensuration, followed by an X-ray examination should, in all instances, establish a diagnosis.

We might just as well eliminate the so-called sprains if we want to obtain good results in these injuries about the wrist.

Important conditions to be eliminated are, traumatic tenosynovitis, fractures of the carpal bones or dislocations of the carpals. In dislocation of one of the carpal bones, particularly the semilunar or scaphoid you will find a deformity on the dorsum of the wrist but there will be no

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alteration of the relationship of the two styloids.

In fractures of one of the carpals, where no displacement exists, you will have deformity plus limitation of motions of dorsi and palmar flexion, but there will not be a localization of pain over the radius nor alteration of the relationship of the styloids—added to this pronation and supination of the forearm are not limited.

In fractures of the base of the radius one always finds localization of pain over the base of the radius and limitation of supination due to the defensive attitude of the pronator quadratus.

The absence of deformity does not mean that there is not a fracture present. Manipulation for the purpose of obtaining crepitus prior to the giving of an anesthetic is not indicated and should not be resorted to.

This brings us to our second conclusion that poor end results are due to inadequate treatment. A perfect functioning wrist is almost essential for the majority of occupations.

A perfect functioning wrist cannot be expected after a fracture of the radius without complete reduction. Complete reduction connot be obtained in most instances without the relaxation obtained by anesthesia. Attempts without anesthesia are brutal.

The method of treatment which we have followed consists of (1) reduction; (2) immobilization; (3) and after care or attention to the soft tissues.

Proper reduction is the most important object in the treatment of fractures. If we make no attempt to obtain accurate approximation of fragments, the subsequent treatment will be valueless as far perfect contour and good functional results are concerned.

The British commission after investigating 1736 cases concluded that "if the anatomical result be good, the functional result is good in 90.7 per cent; if the anatomical result be moderate or bad, the functional result is good in 29.7 per cent; if the anatomical result be bad, the functional is bad in 53.3 per cent. The fracture committee of the American Surgical Association, appointed in 1912, also concluded that "good anatomical restitution of a broken bone, results in better functional results than imperfect reconstruction and permits a shorter period of disability." All fractures should, therefore, be reduced under a general anesthetic (ether, nitrous oxide gas with oxygen or ethylene gas) if there are no contra-indications. The anesthetic avoids pain, removes the psychic elements and overcomes muscular spasm, thereby making reduction a relatively easy matter. The patient's condition permitting, the reduction should be resorted to at the earliest possible time after the injury. The old axiom of waiting for the swelling to subside before an attempt is made at reduction should be discarded for we know that the callus-forming elements are most active immediately following the injury; also, because muscular contractures which in the beginning are only spasmodic later become real contractures which require greater force to overcome.

Reduction is accomplished by firmly seizing the forearm with one hand at the junction of its middle and lower third for counter traction; the wrist is grasped with the other hand; forcible dorsi-flexion of the hand breaks up the impaction; traction is made on the hand so as to disengage the fragments; the hand is then markedly flexed while downward pressure is made over the lower fragment; the hand is then brought to the horizontal position. This procedure will correct the posterior displacement, re-establish the normal relationship of the styloid processes and overcome the abducted position of the hand.

The forearm is covered with stockinette after which palmar and dorsal molded plaster of Paris splints are applied with the hand midway between pronation and supination. The plaster splint must be snugly molded to the base of the thenar eminence otherwise it will not give the desired result. The use of board splints in fractures of the radius should be discarded. Board splints do not immobilize the parts; if you exert sufficient pressure to hold the convex surface of the limb to the flat surface of the splint, a marked flattening of the limb will result. On the other hand the plaster of Paris splints are easily and quickly made, fit the limb snugly and exert uniform pressure, thus avoiding localized edema and trophic changes. For these reasons we have long relegated the board splint to the historic past.

After treatment: The patient is seen not later than twenty-four hours after reduction. At this time another roentgenogram is taken to determine whether the reduction is satisfactory. By resorting to Skinner's lines we can tell whether complete reduction has been obtained. If the

reduction is not complete another attempt is made to better the position of the fragments. After four or five days the splints are removed; the arm is given contrast baths (alternate hot and cold water); moderate superficial massage is given using either the hand or an electric vibrator. This is followed by passive motion of the fingers and wrist joint; the forearm is then baked and the splints reapplied. Passive motion should be performed only up to the point of pain; if we go beyond this the callus forming elements are stimulated thereby producing an exuberent callus which usually results in limitation of motion. This treatment is repeated every two or three days. After two weeks the dorsal splint is discarded. All dressings are removed at the end of three or four weeks. At this time the patient is instructed to use contrast baths twice daily; this is followed by resistive exercise, paying particular attention to palmar and dorsiflexion of the hand and pronation and supination of the forearm. This form of treatment is continued until the normal movements of the wrist joint have been restored.

End Results—Many bad anatomical results are finally followed by fairly good functional results. In most instances, bad functional results are due to incomplete reduction. However, in a few cases poor functional results are due to adhesions and circulatory disturbances, the result of prolonged immobilization. Clinically, we find a cold, smooth, shiny, skin devoid of elasticity, musclar atrophy, stiffness of the wrist joint and in a few cases, almost complete ankylosis; radiologically there is a marked atrophy of the carpal bones and the lower end of the radius and ulna. This is more prone to occur in people of advanced years than in younger subjects. In those cases in which deformity persists it is generally due to a failure of reduction. The deformity consists in posterior displacement with abduction and rotation of the lower fragment; the wrist is broader in its transverse diameter; the radius is shortened and the ulna styloid is more prominent.

"Early complete reduction, early superficial massage and early immobilization, will give a satisfactory functional result in the vast majority of fractures of the base of the radius."

Summary:

1. Complete early reduction under a general anesthetic is essential.
2. Immobilization with plaster of Paris splints is superior to the board splints.
3. Early massage, contrast baths and immobilization are necessary adjuncts to prevent poor functional results.
4. Resistive exercises are essential for a speedy return of all motions of the wrist.

DISCUSSION

Dr. John T. O'Ferrall (New Orleans): I think Doctor La Croix's paper is appropriate. The method of treatment of fractures is always appropriate. There is no class of case in the surgical treatment of disease more woefully neglected than the treatment of fractures.

Doctor LaCroix has laid great stress on complete reduction. Complete reduction is not only essential because of the functional results, but it gives relief from pain, which is probably the greatest consideration on the part of the patient at the time fracture occurs. If a fracture continues to give pain after attempted reduction it is absolute evidence that complete reduction has not been obtained.

I think the point of molded plaster splints is very excellent. The contour of the plaster much more accurately maintains alignment without pressure. We constantly see cases in which the surgeon seems to be under the impression that in order to retain reduction he must put his splints as tight as possible. The consequence is that a large number of cases of ischemic (?) paralysis result. In the hospital the common type is the flat wooden splint which produces marked flattening of the forearm and many times ischemic paralysis is the result. After the fracture is reduced it requires very little pressure to retain the reduction.

Early motion is very essential for the preservation of function of adjacent joints, and I think this should be active rather than passive motion. Doctor LaCroix qualified his remarks by saying it should be done only to the point of pain, which is correct. More damage is done by indiscriminate motion than anything I know of, but when this is carried out to the point of pain it is essential. If there is any doubt about carrying it to the point of pain, the motion should be active rather than passive.

The idea of putting a fracture in splints and leaving it there for four to six weeks is a fatal method. We all know that as soon as the fracture is reduced callus begins to form and the adhesive qualities of the callus are sufficiently strong in a week or ten days to hold the fracture, and in that case, therefore, we should begin motion in a short time, certainly not later than ten days, in order to accomplish the best results as far as active motion of the adjacent joint is concerned.

Dr. Edward S. Hatch (New Orleans): I do not think we can put too much emphasis on the treatment of fractures in the modern way. Reductions, the use of the plaster splint and early motion are the three things most important. Doctor LaCroix has gone into this in detail as to approved methods. I simply want to stress these three points.

Dr. W. P. Bradburn (New Orleans): I heartily agree with this paper, but would like to say a word as to anaesthesia. In the cities, where we have our nitrous oxide and ethylene, we can use it. The routine in our office has been for the past eight or nine years to use ethyl chloride for simple reduction in the office. The cone is placed over the face by the anesthetist and the patient is instructed to raise the opposite arm and hold it in that position as long as he can. It generally takes from three-quarters of a minute to a minute and a quarter before the arm falls and anesthetic is complete. The examination is then made and reduction accomplished. This allows two or three minutes of anesthesia. To do that we have the plaster splint ready. After reduction the splint is applied. This splint is made to fit the arm and not the arm made to fit the splint, as you would have to do in case of the board splint. Some objection might be raised to ethyl chloride as a general anesthetic, but in our experience we have not had any trouble.

Dr. Isidore Cohn (New Orleans): There are a few things that strike us in the handling of these cases. We have been watching cases of fracture of the radius for a good while, and one of the things that strike us emphatically is inadequate diagnosis. We will overlook the question of treatment because once we know what is the matter with the patient everybody should follow the accepted line of treatment, which consists of anaesthesia, reduction, then immobilization, early passive motion, massage and heat. But the important point is the diagnosis. Given a dislocation of bone that will give you some deformity, diagnosis is extremely important. Nine out of ten cases of so-called sprain, if enough pictures are taken, will show fracture, and you will avoid the discomforting experience of having someone else show you several weeks after the patient did have a fracture.

In regard to anaesthesia, I do not like to differ with Doctor Bradburn, but I have an idea that ethyl chloride is a dangerous weapon. It does the damage soon. I am afraid of it. The object of anaesthesia is two-fold,—first to overcome the psychic side, and to produce muscular relaxation. With ethyl chloride the psychic side is overcome, but you do not get complete muscular relaxation. So I am afraid of it. Give them something that is safer and will produce relaxation. I believe ethylene is safer than ethyl chloride. If you do not have anaesthesia you have to use brute force, and that is not good. If you attempt to use it before the patient is asleep you still use more force than you should and traumatize the tissues. What you want is as smooth and perfect convalescence as possible.

Dr. Paul G. La Croix (closing): I want to thank the discussants. As to the anaesthetic, my idea is the same as Doctor Cohn's, and there is no use to repeat that.

We carry out the passive motion immediately after the first dressing is removed. The patient is also made to carry out the active motion, but we do not rely on that until all the dressings have been removed.

REVIEW OF A SERIES OF HYSTERECTOMIES FROM THE RECORDS OF TOURO INFIRMARY.*

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When it was suggested by the Chairman of the Scientific Committee that I discuss before the Touro Staff some phase of the work of the Department of Gynecology, it occurred to me that it might be of interest and value to review the hysterectomies performed in the institution over a period of years. For one thing, it has always been my conviction that these staff meetings should be utilized not only for the report of individual cases of interest and the discussion of abstract subjects, but also as a sort of clearing house wherein to take stock of our results and to estimate the profit and loss, so to speak, of our medical and surgical endeavor. Moreover, the technique of hysterectomy and the indications for its performance are as well standardized as those of any of the more common surgical procedures, which makes a critical estimate both possible and valuable.

It is the unanimous opinion of the best men of the day that in the past we have been entirely too radical in the number of hysterectomies performed for benign lesions of the uterus or conditions external to it. Also there is today a firm conviction that preservation of function is of the utmost importance. The indications for hysterectomy, therefore, while still flexible, are decidedly more rigid than was the case a quarter of a century ago, and I think it would be well to outline them briefly before proceeding to the body of my report.

Malignancy, formerly regarded as a definite indication, is becoming relatively unimportant. Operative treatment gives possibly 70 per cent of cures in carcinoma of the fundus and is therefore still advocated for this condition, but in the treatment of carcinoma of the cervix it has been almost entirely supplanted by radium and X-ray, which yield decidedly more satisfactory immediate and end results, as is proved by a large series of cases collected from various clinics. The place of hysterectomy in carcinoma of the ovary is not so well established. In early cases the removal of the

*Read at a clinical meeting of the Touro Infirmary Staff, April 9, 1924.

uterus with the adnexa is probably of value, but in advanced cases, where implants have occurred or adjacent structures seem to be involved, simple removal of the ovaries should conclude the operation if anything at all is to be done. Again, the mere presence of fibroids is not an indication for hysterectomy. Radium, of course, is contra-indicated in the presence of infection or in growths larger than a three months pregnancy; otherwise it is a most valuable and effective therapeutic agent. Also myomectomy has a field of usefulness that certainly should be extended; large single or multiple growths can be removed by this procedure, leaving a perfectly serviceable organ and offering a prospect not only of continued menstruation but of possible pregnancy. Hysterectomy is indicated in metritis, endometritis and hyperplasia only when other measures have failed. Bleeding in itself is rarely, if ever, an indication, even when inflammatory disease contra-indicates radium or curettement, for often the mere removal of the affected appendages will effect a cure. Even resection of the ovary, by no means an ideal procedure in itself, is preferable to hysterectomy, for it is very often followed by happy results, and at any rate it averts the sudden menopausal picture with which we are all familiar. In simple cases a curettement, which removes the diseased endometrium, is frequently all that is required; moreover, examination of the scrapings will at once determine the underlying cause of the hemorrhage, which in many instances proves to be an unsuspected early abortion. In other cases a single dose of radium or graduated doses will be entirely successful. I can recall very few instances in my own practice in which I have been obliged to do hysterectomy following radiation for bleeding. Procidentia is a definite indication in women advanced in years, when the uterus is diseased in itself or when for various reasons the interposition operation cannot be done. Tuberculosis of the uterus demands hysterectomy, as does malformation with infection. The age of the patient is a prime consideration. After the menopause preservation of function need not be considered, before it the reverse is true, and the patient's age should certainly weigh heavily in the decision for or against hysterectomy.

To sum up, then, hysterectomy should be a last resort rather than a first choice; it should be done only when other forms of treatment are contra-indicated. Conservatism should be the rule in all benign lesions, in inflammatory disease where the uterus itself is not involved, and in malignant disease of the cervix, where experience has shown that radiation gives more uniformly good results than the Wertheim technique, with its high mortality and questionable end results. Above all, the younger the woman the more conservative should be the procedure; it is not too much to say that the surgeon who removes the uterus of a woman under 40 should be very certain of his indications and well able to prove his case.

During the period 1921-1923, 224 hysterectomies were performed at Touro. The largest number performed by any one surgeon was 53, 23.7 per cent of the total number, the next highest 44, 19.8 per cent, and the third highest 40, 18 per cent. One surgeon did 22, two 10, one 9, one 7, two 4, seven 2, and seven 1 each. One hundred twenty-one of these hysterectomies, over half, were done for fibroids, and during the same period 42 myomectomies were done for the same condition. Of these the surgeon who did 40 hysterectomies, 24 of them for fibroids, did 26 myomectomies, 61.9 per cent of the total number. The surgeon who did 53 hysterectomies, 17 of them for fibroids, did 6, 23.7 per cent. Three surgeons did 2 each and 4 did 1 each. It is evident, therefore, since the hysterectomies outnumbered the myomectomies 3 to 1, that myomectomy is not a popular operation except in individual cases.

The ages ranged from 17 in 1 case to 70 in 1, the average age being 41.2 years, and the largest number in any one decade being between 40 and 50. One-hundred-one patients, 45.9 per cent, were below 40. Thirty-four of the patients were unmarried, and 32 of the married patients had never conceived.

The patients' complaints may be divided roughly into four classes, pain, menstrual irregularities, urinary disturbances and general symptoms. One-hundred-seven patients complained of pain, varying all the way from a mere sense of weight to intolerable discomfort, but acute pain in every instance was associated either with adnexal disease or acute appendicitis. Twenty-five patients with fibroids complained of dysmenorrhea since the known onset of the growth. One hundred thirteen complained of menstrual irregularities, either menorrhagia or metrorrhagia.

Twenty-two complained of bladder symptoms, chiefly frequency, though in one case there were periods of acute suppression due to pressure. Other complaints included leukorrhea, prolapse, lacerations and pruritus. Thirty-five patients were aware of the presence of a growth.

Eight operations in the series were done for carcinoma of the cervix, 2, both by the same surgeon, for carcinoma of the fundus, 4 for carcinoma and 1 for sarcoma of the ovary, and in 1 case all the pelvic organs were removed for a general carcinomatosis with omental implants and an extension to the breast. Sixteen operations in all were done for malignancy of various sorts, a much smaller number, I am sure, than would have been the case during a similar period 10 years ago. Seven operations were done for a condition described as "precancerous" or "potential malignancy", with bleeding as the main symptom. In 7 cases the uterus was removed for tubal disease without uterine symptoms, and in 3 it was removed because of ovarian disease. Thirty-three hysterectomies were done for simple bleeding uncomplicated by adnexal disease, and 13 were done for bleeding complicated by this condition. Sixty-four operations were done for fibroids associated with tubal disease, and 57 for uncomplicated fibroids. Fourteen were done for procidentia, in 5 instances associated with fibroids and in 1 with malignancy. Two were done for bicornate uterus, 1 for atresia of the vagina with a history of long-standing infection, 1 for tuberculosis, 1 for chorio-epithelioma following hydatid mole, and 2 for pyometra. One was done because the uterus was so imbedded in adhesions that in their release the entire peritoneal surface was stripped and the organ materially damaged.

Supravaginal amputation was done in 128 cases, in 3 instances, all by the same operator, trachelorrhaphy being done also. Complete hysterectomy was done in 33 cases, in 3 of these, all by the same operator, the cervix being loosed from below before the abdomen was entered. Vaginal hysterectomy was done in 34 cases, in 1 instance the cervix being left in situ. One Wertheim hysterectomy was done for malignancy. In 15 cases, all by the same surgeon, Schroeder amputation of the cervix was done prior to supravaginal amputation. In 7 cases the operation was described simply as hysterectomy and it was not possible to determine what technique was employed.

Bilateral removal of the tubes and ovaries was done in 52 cases and unilateral removal in 27; bilateral removal of the tubes was done in 29 cases and unilateral removal in 8; bilateral removal of the ovaries was done in 2 cases and unilateral removal in 15, making 133 cases in which partial or total removal of the appendages was done. In 17 of these cases, however, exactly what was removed is doubtful, as the loose use of the term pan-hysterectomy to include removal not only of the uterus but also of the appendages or some portion thereof led to considerable confusion. Other operations included appendectomy in 66 cases, herniotomy in 4, gall bladder operations in 5, perineorrhaphy in 51, colporrhaphy in 3, partial colpectomy in 1, D. and C. in 7, cauterization in 4, and repair of a fistula in 1.

The average time of operation was 1 hour and 10 minutes. The lowest individual time was 42 minutes, based on 40 cases, and the highest 2 hours and 25 minutes, based on 2 cases. The stay days, excluding deaths, averaged 18, the lowest individual average being 11 for 4 cases and the highest 40 for 9.

The total complications amounted to 17.1 per cent, and included stitch abscesses, pelvic abscess, rupture of the wound, cystitis, colonic infection, acute dilatation of the stomach, acute suppression of urine followed by a vesico-vaginal fistula, cellulitis of the cervical stump, measles, typhoid, bronchitis, dysentery, edema of the vulva, psycho-neurosis, parotitis and shock. There was a mortality of 11 or 5 per cent. In 3 cases death was due to acute dilatation of the stomach, in 1 to shock, in 2 to peritonitis, in 2 to pneumonia, in 1 to acute nephritis, in 1 to a colon bacillus infection, and in 1 to a fat embolus.

In conclusion, there are several general points which I think might well be stressed. The question of inadequate histories has figured in this, as in every other statistical investigation which I have ever attempted, and the remedy, it seems to me, lies in a closer co-operation between the visiting and the interne staff. I can illustrate this by calling to your attention one of the most flagrant omissions noted in this particular group of histories; the interne is not permitted to make pelvic examinations on private patients, the visiting man fails to enter his findings on the history or to dictate them in the operating room, and the history is finally filed minus this important point. In addition, in many instances the opera-

tive record does not contain the indications for the procedure selected, an omission which a prejudiced investigator might be inclined to construe rather harshly, while in other instances there is no description of the operative findings. A critical estimate is necessarily difficult in the face of such omissions. Again, there is no uniformity in the descriptions of growths or organs, and contradictions and inconsistencies are frequent. A fibroid is the size of a lemon in one portion of the history and of a cocoanut in another. The interne's notes may describe the patient's menstrual history as regular and normal, while the surgeon's operative notes state that the uterus was removed for bleeding. I could of course multiply such instances for you.

Another grave need is a standardized nomenclature for operations such as is in use for diseases. In these particular records half a dozen terms were used to describe the removal of the uterus, while the term hysterectomy or pan-hysterectomy was used in literally dozens of instances to include also the complete or partial removal of the adnexa. There is absolutely no justification for this usage in etymology, and none which I am aware of in surgery. You will note that in nearly all of these instances the blame belongs to us and not to the interne staff; we are at fault when we O. K. incomplete and inaccurate histories, and certainly we alone are at fault when the operative notes are lacking in any detail.

There is another suggestion I should like to offer about our system of filing. The unit system of admission is, as you know, employed in many hospitals; that is, each time the same patient is re-admitted he is given the same history number and in this way a perfect follow-up is possible, at least in the hospital. With our present system at Touro this is impossible, and therefore I cannot give you, as I had hoped, the relative figures for the use of radium in diseases of the uterus. To illustrate, over a certain period of time one surgeon has 49 radium histories filed under fibroids, and another 35. But in the first instance each history represents a different patient, in the second, each history represents a single application, possibly the third or fourth, to a patient represented elsewhere in the series by another application. As each history is filed under a separate number it is manifestly impossible, without the expenditure of time and labor which the results would hardly justify, to check them up and reduce the figures to the same basis. It would be well if we could devise some method of filing the histories or admitting the patients which would make such information readily available.

THE ROENTGEN RAY TREATMENT OF DISEASED TONSILS AND ADENOIDS.*

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The treatment of diseased tonsils and adenoids is still one of the most discussed questions in medicine, and there is a growing realization that tonsillectomy is unsatisfactory and inadequate as a remedy for a large proportion of the local and general ills for which it is undertaken. As early as 1920, French, in a paper before the American Laryngological Association, pointed out the inadequacy of tonsillectomy in many cases of the so-called "tonsilar infections", because the lingual branches of the lymphoid tissue retained pus and bacteria, and because a safe and efficient method of disposing of these lingual branches has not yet been devised. Very recently, Denman has unhesitatingly stated that "tonsillectomy has to a large degree been weighed in the balance and found wanting, and that it is destined to be superceded in many cases by some superior method."

The Value of the Tonsil

One of the points on which the advisability of surgical removal of an organ as opposed to medical treatment rests is, of course the value of that organ to the individual. Appendectomy has been generally accepted because it is agreed that the function of this organ is negligible. Certain advocates of tonsillectomy class the tonsil with the appendix, and claim that the harm which it may do entirely outweighs any value which it may have to the individual. Colonel Bushnell, however, because of "the immunizing dose of tubercle infection sustained in childhood by the repeated ingestion and inspiration of tubercle bacilli", believes that the tonsils may be "a locus thru which the circulating tissue of the infant derives its immunologic defense against pathogenic bacteria". Fishberg considers that the presence of the tonsil, even in the adult, is a valuable factor in

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recovery from pulmonary tuberculosis. Those of us who are in accord with the teachings of these men will indeed welcome a method other than tonsillectomy.

Review of the Literature

As early as 1913, Nogier and Regaud reported encouraging results from the X-ray treatment of diseased tonsils and adenoids. It was not until 1919, however, when Witherbee of the Rockefeller Institute for Medical Research announced his plan of treatment and the results, that the method came to the front.

Hickey, and later Kahn, reported encouraging results following the treatment of diphtheria carriers by means of the Roentgen-ray. Ullman and Lane, working independently, reported the disappearance of hemolytic streptococci following the irradiation of the tonsils. Wells, in discussing the treatment of tonsils by irradiation, emphasizes the importance of "the penetrating effect of the rays which treat the throat as well as the tonsil. The adenoid, infratonsillar nodule, the lingual tonsil and the chain of lymphatics which extend well up the lateral walls of the throat to the eustachian tube all receive irradiation. These tissues are all more or less diseased and exhibit markedly hypertrophied and infected crypts. The clearing of this area is important and leads to success in relieving symptoms which we hope to cure, as much as the treatment of the tonsil".

Roentgen-ray Treatment

Selective action of the rays.—The selective action of the Roentgen-rays on the tonsillar tissue is no longer questioned, and is explained by the fact that the structural characteristics which determine susceptibility to irradiation are of a cellular nature: undifferentiated cells, hyperchromatic nuclei, vascularity, especially when due to an abundance of delicate capillaries, and absence of much intercellular substance. Satenstein and Remer make the following statement: "Acute and subacute inflammatory tissues are characterized by lymphocytes,—round cells. These are the least resistant of all pathological cells and are most readily influenced by the application of the Roentgen-rays.

Atrophy of the tonsil is due to the absorption of the immature lymphatic cells in the follicles, lessening the depth and distortion of the crypts and at the same time causing an eversion and evacuation of contents. The destruction of the lymphoid cells is associated with endarteritis obliterans and, finally, formation of the dense connective tissue.

Types of tonsils.—Tonsils may be classified into three general types: (1) the lymphoid type of childhood in which the lymphoid tissue predominates in the formation of the tonsil structure; (2) the fibrous type found in adults, in which the fibrous tissue predominates, only a small amount of lymphoid tissue remaining, and in which the crypts are shallow and free from pus; and (3) the fibrous type just described, but with large, deep and definitely infected crypts.

In tonsils of types (1) and (2), Roentgen-ray treatment, is the method of choice In type (3), with large, deep and infected crypts, tonsillectomy, followed by Roentgen- treatment, is the method which will give the best results. For reasons which are obvious, the statements regarding the tonsils are equally applicable to adenoids.

Indications for treatment—Roentgen-ray treatment is especially indicated in cases of hypertrophy with vegetation in the rhino-pharynx, and in cases complicated by hemophilia, cardiovascular conditions, Bright's disease, chlorosis, or tuberculosis. With surgical treatment, there is the danger always attendant on the taking of a general anaesthetic, and if the operation is performed under a local anaesthetic, one cannot be sure that the patient will be free from pain and anxiety. Moreover, alarming hemorrhage may occur. Sequela, such as septic emboli, lung absecc, empyema, phlebitis, endocarditis, middle ear and mastoid, may retard recovery. Furthermore, the results of surgery are often unsatisfactory because hypertrophy can recur, and excessive lymphoid tissue still remains in the rhinopharynx.

Following Roentgen-ray treatment, there are no known complications, provided the technic is properly carried out. Dryness of the throat and occasional swelling of the parotid and submaxillary glands have been the only disagreeable after-effects, and these usually subside in a few hours. In a series of more than 70 cases, of all types, which I have observed from 1 to 3 years, in which the patients suffered from recurrent attacks of tonsilitis and pharyngitis, more than 80 per cent have been relieved by Roentgen-ray treatment. Good results were also obtained in cases of recurrent pharyngitis, following removal of the tonsils and adenoids. As a result of Roentgen-ray treatment, the size of the tonsil is reduced, and the irregular, nodulated, ragged, or

spongy tonsil becomes smooth, firm and pale, as when normal physiological atrophy takes place.

Technic.—The patient lies on his back on the treatment table, with an angle block under his shoulder and his head turned to on side, in the same position as for radiographing the upper molars. An area of 2.5 or 3 inches square, the center of which is just below the angle of the jaw, is irradiated. This area may conveniently be mapped out with foil or leaded rubber. At present I am using the following formula: 120 K. V., 5Ma., F.S.D.30cm., 4mm. Al, time 10 minutes over each tonsil in adults, and 8 minutes in children. Two or three irradiations, as the case requires, are administered at six week intervals. Several patients were given ten minute exposures at 200 K. V., 5Ma., F.S.D., 50cm., 1mm.Cu, plus 1mm. Al., but I have not found this method superior, and shall therefore continue the original technic.

Conclusions

The surgical treatment of diseased tonsils and adenoids has not proved altogether satisfactory. Moreover, the tonsil has a function which great care should be taken to preserve. It is reasonably certain that with sufficient time and correct dosage, repeated if necessary, atrophy of the tonsil, similar to the normal physiological retrogression, can be obtained, and all evidence of disease removed. The results of Roentgen-ray treatment have been very satisfactory, and the literature on the subject is evidence of its efficacy.

Bibliography

1. Berven, Elis, M.D., Radiological Treatment of Chronic Tonsilitis, Acta Radiologica 2:301, Sept. 1923.
2. Bowditch, H. I. & Leonard, R. D., Treatment of Pertussis by Roentgen-Ray, Boston M.&S. J. 188:312, March 8, 1923.
3. Busi, A.: Committee Report on Roentgen-Ray Treatment of Malaria, Policlinico, Rome, 30:2, Jan. 1923.
4. Cunningham, W. L., Roentgen-Ray Treatment of Tonsils and Adenoids, J. Florida Med. Assn., 8:213, June, 1922.
5. Dunham, K. & Norton, V.: An X-Ray study of the absorption of Tuberculous exudates within the lung. Am. J. Roentgenol. 10, Feb. 1923.
6. Evans, W. A.: X-Ray Treatment of diseases of the ear, nose and throat, J. Michigan M. Sec., 22:65, Feb. 1923.
7. Fishberg, Maurice: The tonsils in the Tuberculous, Med. Clin. N. Amer. Nov., 1922.
8. Garretson, J. L.: Roentgen Therapy in Dentistry, Amer. J. Roentgenol.: 9:740, Nov., 1922.
9. Irons, E. E.: Some less frequently considered portals of infection in arthritis and iritis, J. A. M. A. 80:1899, June 30, 1923.
10. Hickey, P. M.: Treatment of Diphtheria carriers by means of the Roentgen-Ray. Am. J. Roentgenol. 9:319 May, 1922.
11. Isrel, S.: X-Ray treatment of tonsils and adenoids, Texas State Med. 18:301, Oct., 1922.
12. Kahn, D.: Treatment of Diphtheria carriers with the Roentgen-Ray. Am. J., Electrother. & Rad, 40:287, Sept., 1922.
13. Kemp. C.: Roentgen-Ray treatment of subacute inflammatory processes, Deutsche, Ztschr. f. Chir. 176, No. 4 Nov. 1922.
14. Lane, Laura A.: A study of the tonsil question with a preliminary report of Roentgen-Ray and Radium therapy in the treatment of pathologic tonsils, Minnesota, Med. 697, Feb., 1923.
15. Lafferty & Phillips: Radiotherapy of diseased tonsils, J. Radiology, Apl., 1922.
16. Murphy, J. B., and others: Atrophy of hypertrophied tonsils, adenoid, and other structures of the throat induced by small doses of X-Ray., J.A.M.A., 76:228, Jan., 1921.
17. Murphy and others; The effect of small doses of X-Ray on hypertrophied tonsils and other lymphoid structures of the nasopharynx., J. Exp. Med., 33:815, June, 1921.
18. Nogier, Th.: Traitment de l'Hypertrophie amygdalienne pars les Rayons X., Jour. de Radiologie et D'Electrologie, 26:428, Oct., 1922.
19. Osgood, Herman A.: Radiation treatment of hypertrophied tonsils., Am. Jour Elect. and Rad. March, 1922.
20. Pacini,, A. J.: X-Ray treatment of tonsils with the conjoint use of the Ultra Violet Ray, J. Radiology, 3:131, April, 1922.
21. Regaud and Nogier: Applications a la Roentgentherapie, Archives d'Electricitie Medicale, Jan. 25, 1913.
22. Robinson, Carl F.: The present status of radiation treatment of the tonsils. New York Med. J. 117:39, Jan., 1923.
23. Schraded, R.: Treatment of erysipelas with Roentgen-Rays. Therapeutische Halbmonatschefte, Berlin, 35: 19, Oct., 1921.
24. Soiland, A.: Action of radiation on tonsilar and hypertrophied tissues. Southwestern Med. 6:196, May, 1922.
25. Southard, J. D.: The X-Ray treatment of tonsils and adenoids. J. Arkansas M.A., 18:130, Dec., 1922.
26. Storchitch, Drogolieub: Treatment de l'hypertrophie amygdallienne pars les rayons X. These de Lyon No. 117, 1922.
27. Trinder, J. H.: X-Ray treatment of tonsilar and lymphoid tissue. Ann. Otol. Rhinol. & Laryngol., 31:1044, Dec., 1922.
28. Ullman, H. J. & Nuzum, F.R.: The bacteriology of irradiated tonsils. Am. J. Roentgenol. 10:396, May, 1923.
29. VanAllen, W. H.: A retrospective note concerning treatment of tonsilitis by X-Ray, J. Radiology, 2:18, Dec. 1921.
30. Van Ree, A.: Roentgen-Ray treatment of surgical tuberculosis. Nederlandsch Tijdschr. v. Geneesk, Amsterdam, 2:20, Nov. 13, 1920.
31. Waters, McCready & Hitchcock: Roentgen-Ray treatment of chronically infected tonsils and adenoids., Am. J. Roentgenology, 9:469, August, 1922.
32. Withers, Sanford: On the use of Radium to effect an atrophy of Pharyngeal lymphoid tissue. The Laryngoscope, 5:32, March, 1922.
33. Witherbee, W. D.: X-Ray treatment of tonsils and adenoids. Am. J. Roentgenol, 8:25, Jan., 1921, and New York State J. Med., 21: 14, Jan., 1921.
34. Witherbee, W. D.: Principles involved in X-Ray treatment of tonsils. Laryngoscope, 31:305, May, 1921.
35. Witherbee, W. D.: Treatment of focal infection of the throat by X-Ray compared with surgical removal of tonsils and adenoids. J. Radiology, 3:129, April, 1922, and New York Med. J. 115:261, Mar., 1922.
36. Witherbee, W. D.: Contraindications and results in surgical removal of tonsils and adenoids compared with X-Ray therapy. Am. J. Electrotheraphy and Rad. 40:375, Dec., 1922.
37. Witherbee, W. D.: X-Ray in the various forms of infection. J. Radiology, 5:18, Jan., 1924.

DISCUSSION

Dr. S. C. Barrow (Shreveport): I read Doctor Edwards' paper last night and have listened again to its reading this morning, and wish to endorse heartily everything he has said, with the possible exception of his technique, but that does not interest you. The question that interests you is the X-Ray treatment of tonsils and adenoids. Since 1922 we have treated something over 220 cases, and in every case, with the exception of five, the treatment has been satisfactory to me and to the patient—satisfactory to the extent of having given the patient relief from the clinical symptoms, some of these patients having had rheumatism and heart trouble.

This is the same old story that has been

repeated since 1895, when the X-Ray was first used. There has been a fight and scrap, but ultimately the X-Ray has found its place, which it will do in the treatment of the tonsils.

It is useless to talk to you about the disadvantages of surgical treatment. We do not fight on surgical treatment in some cases. We are trying to get co-operation, and I am glad to say we are doing it. You hear lots of talk about the bad effects of the X-Ray, of its bad effect on the thyroid, how it burns the skin, and you even hear that it produces sterility when used in treating females. Of course, it can and will do all these things, and the fact that it can and does emphasizes the fact that the men not versed in the use of the X-Ray should not attempt those cases.

We have been criticized for treating too many and all types of tonsils. We deserve that criticism in a way, but it was done in an effort to find out which cases are suitable, and we are now eliminating from our work those cases which we believe are surgical cases. I wish it were possible for us to lay aside our prejudices in our work. I wish it were possible for me to treat tonsils in harmony with the laryngologist and others. We are treating them in harmony with the general practitioner. Out of the cases we have treated, twelve had been extirpated surgically with no relief. If I had a child that needed tonsil treatment it would get tonsil treatment in my own office with the X-Ray.

Dr. Homer Dupuy (New Orleans): The omnivorous X-Ray has now invaded the tonsil region. We are treading on delicate ground and we must approach the question of tonsils and X-Ray in a spirit of reverence for truth and free from vaingloriousness. The history of medicine repeats the old story of drawing sweeping conclusions from insufficient material. The X-Ray may establish a place for itself in removing tonsils in some special group of cases, in which contraindications may exist as to anesthetics local and general. One thing certain, unless the X-Ray can destroy the lymphoid tissue, which is the essential element, of the tonsil, no good result can follow. Our tonsillectomies sometimes fail us, because, in spite of whatever method or technic is applied, lymphoid cells may remain in and around the tonsil fossa. In a very small percentage of operated cases these remaining lymphoid cells may lead to recurrence of tonsil tissue. And this seems well nigh unavoidable. Several years usually elapse before the recurrence is detected. Not sufficient time has elapsed to judge the end-results of these X-Ray applications. Will the X-Raying be followed by a recurrence of this lymphoid tissue? Their limited experience does not justify the overenthusiasm of Drs. Barrow and Edwards.

Dr. A. U. Desjardines (Rochester, Minnesota): I would like to say a few words on this problem because it is extremely important. I agree with Doctor Barrow and Doctor Edwards about certain phases, and I think Doctor Dupuy has something to say on his side which must be listened to. It has been definitely proven experimentally over and over again that lymphoid tissue is one of the easiest types to influence with radiation, either radium or the X-Ray. Warthin has shown that better than anyone else. Russ, in London, has done the same thing in animals. If you expose only the ear of a rabbit to the rays for a sufficient length of time you can cause a drop in lymphocytes of 50 per cent in three hours. Then regeneration will take place. In the human being we see the same thing. Last winter we treated a large number of patients, having the blood count taken at intervals of one to six hours so as to find the rate of regeneration. In three hours there is a marked drop of lymphocytes, an early polymorphonuclear leukocytosis, followed by leukopenia. The lymphocytes drop and after varying periods of time begin to regenerate. In certain structures like the tonsils and spleen the same thing happens, only not so rapidly. You can take an enlarged spleen and reduce it by radium or X-Ray to practically the normal point, and if you are careful in your judgment and your work and have had experience you can keep that spleen down for a long period of time, particularly in leukemia. The tonsil, being made up almost entirely of lymphoid tissue, should be and is, under certain conditions, very radiosensitive. I do not think radiation can be very effective in the old adult with a fibrous, cryptic tonsil, with buried foci, because there is not much lymphoid tissue left to work on. But in the young adult and child I would be tempted, at least in my own family, to try radiation first for a reasonable time, and if the result was not satisfactory, then I would have them thoroughly cleaned out.

We know that even in the best of hands aspiration pneumonia may follow tonsillectomy. Therefore, if there is any means of making a radical operation unnecessary it is worth trying.

Dr. Louis G. Stirling (Baton Rouge): I am not a nose and throat specialist. I am only a country doctor, but I have seen in so many instances disappointing results from tonsillectomy, sometimes very serious effects, that I have been looking for a long time for some means of avoiding the removal of so many tonsils, and if the application of the X-Ray or radium does not complicate the subsequent removal, I do not see any objection to at least giving it a trial. Another reason, I saw a promising young woman brought to the verge of death from pulmonary abscess following a simple tonsillectomy. So I think anything that offers relief from that danger is certainly worth trying.

Dr. Harold G. Edwards (closing): I want to express my appreciation to Doctors Barrow and Desjardins for their discussion; also to Doctor Dupuy for his very friendly discussion.

However, the point which I made was this, that it is conservatism in tonsil work that I wish to emphasize. If we want to get rid of the tonsils, let them take them out by the knife or some other method. Irradiation treatment does not destroy the function of the tonsil. We do not destroy all of the lymphoid tissue. I do not believe, as I said, that the large, ragged, and definitely infected tonsils are cases for irradiation.

Coming back to Doctor Dupuy's remark about tonsillar tissue remaining after operation, Lane collected statistics from 1,000 cases operated on at John's Hopkins Hospital, examined before operation and one to four years afterwards. Fifty-five per cent showed tonsillar tissue in the fossae; 40 per cent of the patients were just as liable to sore throats after the operation as before.

As you well know, the effect of irradiation on glandular tissue is little, and many of the bugaboos thrown out by the throat men about the destruction of the salivary and parotid glands has been overthrown by Orndoff, Ivy and others of Chicago, who say that the parotid and salivary glands are not affected. It is nauseating to me

to read reports from men like Babcock and Coakley who come out with the report from a few cases and tell about burns, baldness and even sterility. You do not irradiate the testicles or ovaries when you treat the tonsils.

In my series of cases, seven were treated following tonsillar operation. I have not made a close study of the statistics in regard to deaths following tonsillectomy. However, in the Annals of Otology and Rhinology, Loeb, sent out 5,000 inquiries and received 700 replies and death had been caused in 126 cases following tonsillectomy.

My honest belief is that irradiation treatment of diseased tonsils and adenoids in selected cases produces results, and also that for the throat men the handwriting is on the wall and that tonsillectomy in many cases is to die hard.

ACUTE INTESTINAL OBSTRUCTION*

E. M. ELLIS, M. D.

CROWLEY, LA.

Modern surgery, in relieving acute-conditions has made rapid strides in recent years, greatly reducing the mortality, especially of acute adominal pathology, and yet the morbidity of acute obstruction is taking too great a toll of human life. It, therefore, is encumbent upon the surgeon to act quickly, and with a full appreciation of the tragic results of watchful waiting.

Cases of intestinal obstruction exemplify better than any other condition how dangerous it is to wait for the fully developed clinical picture, before arriving at a decision. Our main object must be to recognize when surgical relief should be afforded, and we must decide rapidly if our reflections are to be of any use to the patient.

When we remember that we are dealing with a condition whose mortality rate, in the hands of the best of surgeons, is from fifty to sixty per cent; we believe that it is highly expedient to sound a note of warning to every physician and surgeon to do something to impede these alarming statistics, and we hope by agitating this subject ever and anon, that all of its symptons, features and phases will become so familiar that none of us will overlook an early diagnosis, and a quick decision.

Believing that we are more interested in curing a disease, than in knowing its cause, I shall not dwell upon this phase of the subject, except to say that we should consider the age, as an important factor, as we all know this is more prevalent in children than in the adult, especially the intussusception type, although this type sometimes occurs in adults.

Pathology—In view of the rapid fatalities which result in these cases, it becomes highly desirable to find the source and nature of the toxin involved, and on this subject there has been much said and written in recent years. Stone found in the lumen of the obstructed loop, a toxin which, when injected intravenously into normal animals causes the symptons of obstruction. Certain chemicals are undoubtedly developed as the result of protein disintgeration, and cause the symptoms prevalent in acute intestinal obstruction.

J. W. Ellis has made from the laboratory of surgical research, of the University of Pennsylvania, a most exhaustive study of all the data up to date on this subject, and concludes that death in these cases is due to a form of chemical intoxication, and that this poison is undoubtedly elaborated in the cells of the greater part of the mucosa of the small intestines, but chiefly in those of the duodenum, and that it is manifestly excreted partly into the lumen of the intestines, but the larger part passes into the lymph stream.

Werelius, of Chicago, has, with some good reasoning advanced the theory that death is due to hepatic insufficiency; that death is always preceded by complete aperistalsis, and with this bile secretion stops. He further argues that with the cessation of bile, all the other functions of the liver cease simultaneously. This theory bears out my observation that in all cases of late vomiting of obstruction, there was complete absence of life. Brooks, however, claims that it is the effect of the toxemia on the hepatic cells that causes this cessation of bile. From the above opinions, it would appear that there is no one factor that completely satisfies everybody, but we do know whether it be proteose intoxication, bacterial poisoning, injury to intestinal mucosa, dehydration or otherwise, that the cause of death is a potent and complex agent, that should be dealt with quickly, to be of any ultimate benefit to the patient.

Symptoms—In seventy-five per cent of the cases, the only symptoms present in early stages are peristaltic pain, vomiting, constipation, with tenesmus and bloody mucus. These symptoms should at once arouse suspicion of obstruction, and every effort

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should be made to decide the point, without delay. Stercaraceous vomiting, abdominal distension, rapid feeble pulse, and symptoms of collapse, belong to the late stages, and surgical aid then will be of no avail.

The diagnosis is often rendered difficult, because the symptoms may be masked by those of initial shock, which manifest itself by accelerated pulse, and collapse. In very severe cases these symptoms merge almost uninterruptedly into the paralytic manifestations of the terminal stage, so that the real signs of obstruction are not observed at all.

Repeated percussion and ausculation afford some aid in diagnosis, if we repeatedly hear at any one place a metallic note, splashing noise, and if the abdomen appears asymmetrical, with a localized area of the intestine more resistant than its surroundings, we ought, especially think of ileus. On the other hand the prevalence of dead silence from the beginning, in the equally distended bowel, most likely points to peritonitis, or at least to a severe toxic intestinal paralysis. If obstruction is high you have early vomiting of biliary matter, and less peristalsis. Patient may also pass gas and possibly have slight bowel movement, which without close observation, might be misleading.

If we are confronted with a condition such as above described symptoms, coupled with a failure after repeated efforts, to move bowel by high enemas, we should act at once, and not wait for the sausage-shaped mass of intussusception, and other ultra signs, that can have but one tragic end, because it is stated by good authority that when the lethal dose of toxin has been produced, within the intestine, and absorbed into the circulation, there is, at present, no known means of saving life.

Treatment—Early surgical interference, aided by external heat, appropriate stimulation, stomach lavage, the introduction of fluids by every known means possible, before, as well as after operation, are all life-saving measures.

Fenny says it is better to have a poor operation, on a patient in good condition than a good operation on one in bad condition, and this certainly applies to acute obstruction. It has been my experience that the longer a patient lives with this trouble, before operation, the sooner he will die after operation.

We should not be carried away with any one method of procedure, but be governed by the merits of each case. If the case is late, and too severe, a two step operation may be best: First and foremost is the drainage of the obstructed loop, either by fistula or enterostomy. This may be made anywhere above the obstruction. It has been my practice in a few cases to irrigate the loop before making the enterostomy. I believe that if the case is not too desperate, and there is a reasonable chance for getting by, a clean resection, with an anastomosis will give almost as good results as any mode of procedure. If a patient is almost hopeless, as we often see, I think it is best to make a long fistula in the loop, at any point, giving as free drainage as possible, and depend on your fluids and stimulations for the rest.

During the past few years we have had about fifteen cases of acute obstruction at the Crowley Sanitarium, with a mortality of practically fifty per cent. The time in which most of these cases were admitted was from twenty-four to seventy-two hours after onset of the disease. Only one case that was received within the first twenty-four hours proved fatal, and this case seemed to be of a fulminating type, in which the toxemia produced a collapse in this short length of time. The delay in getting these cases into the hospital would lead us to believe that there is no class of acute cases more often unrecognized and misunderstood.

With your permission, I would like to report a few cases that fell into our hands, for treatment, during this period of time.

First, I wish to refer to a case that died thru an error in diagnosis. A young man taken suddenly with pain and vomiting, and all the earmarks of acute appendicitis. He was sent in for a hasty operation, as his condition seemed to be rather desperate. With no experience to guide us, this having occurred during the adolescent days of our surgical career, we at once made a viscious attack upon an innocent appendix. Immature as we were, we were not satisfied with the condition we found, but hesitated to go further. Consequently our patient died very promptly, and on post mortem examination, we found a knuckle of small bowel, caught under a band of messenteric adhesions, producing complete obstruction, causing, of course, all the stormy symptoms, and likewise the patient's death.

The second case I wish to refer to is that of a little girl thirteen years old who was admitted to hospital seventy-two hours after the onset of disease, having arrived at the hospital at twelve o'clock at night, after being brought twenty miles in an automobile. Her condition was very bad, but after opening abdomen we decided to do a resection, which necessitated removing about eighteen inches of intussuscepted and gangrenous bowel, which in this instance was the first portion

of the jejunum, making a lateral anastomosis, therefore draining the contents of the loop directly into the distal segment of the bowel, which, in no case has proven to be toxemic, closing the abdomen with a small cigarette drain, placed some distance from the anastomosis. When I remembered Murphy having stated that no obstruction of this particular type would recover, after forty-eight hours standing, I had little hopes of the patient's recovery, but with the assistance of the physicians who were with me in this case, working in relays of six hours each, giving our personal attention to the administration of all fluids, which we gave by every available method, the little patient soon began to gain ground and made a good recovery.

The third case was a man sixty-five years old was taken suddenly ill, with pain in right iliac fossa, with nausea, but no vomiting. Was seen at once by physician, who made a diagnosis of appendicitis. Hypodermic was given, and patient rested well during the remainder of the night. I saw the case the following morning, in consultation, at which time a mass could be felt at McBurney's point. The patient did not appear to be very sick, and yet this mass made us think of obstruction. We had failed to get any results from high enemas, and therefore ordered him to the hospital at once, and when the abdomen was opened a double intussusception was found, the lower ilium was invaginated into itself, and this mass was forced through the first part of the colon. There was a complete stasis of the circulation of all the tissue involved, and the edema had advanced to such a stage that it was impossible to disinvaginate the mass. We, therefore, decided to make a clean resection, removing the lower end of the ileum, with cecum, and part of the colon, making a lateral anastomosis between the ascending colon and the ileum, patient made a slow but complete recovery.

The fourth case with intussusception, was operated on at the end of twenty-four hours, with resection and lateral anastomosis, recovered. But this recovery was rather stormy during the first twenty-four hours, having developed convulsions, twelve hours after the operation, which lasted at intervals for twenty-four hours. It is barely possible that convulsions were due to excessive amount of fluids which were used in this case.

We had, in all, eight cases of resection, with four recoveries and four deaths. There were two babies, five and six months old, operated on six hours after the onset, in which reduction was very easy, with no untoward symptoms in recovery.

One case with disinvagination, with death following. The other cases were brought in late, with practically no chance of recovery, a simple fistula being made in the obstructed loop to establish drainage, but none of these cases recovered, but died as a result of failure of early diagnosis.

DISCUSSION

Dr. Louis B. Crawford (Patterson): I think the remarkable thing about this paper is that here has been tackled what I consider the hardest problem in surgery, by a one-horse surgeon in a one-horse town with a one-horse hospital. That to me is a remarkable thing. Fifteen or twenty years ago that was unheard of; such patients had to be taken to the large centers. I wish to point out that fact—that the rural districts are coming to the fore.

It was my pleasure to see one of these cases which Doctor Ellis mentioned. He asked me to see the patient and told me what he had done. I said there was no use in my seeing him, but afterwards when I saw the boy he was not only living, but his facial expression was good. I said then that since he was living it was fair to expect that he would pull through.

There are a lot of small, successful hospitals growing up in the country that we ought to respect, and I think Doctor Ellis shows that he is running one. He handled his subject admirably.

To me the hardest problem in surgery is this, because, as the French say, the surprises are always there. We should realize that what we need is judgment, for unless we have judgment in this type of intestinal obstruction we will not be able to handle these cases. I have had quite a few. One case I might mention here. It shows that we should guard against jumping at conclusions. This was an individual with symptoms of intestinal obstruction, and I jumped at intussusception and was almost on the point of operating. Fortunately, I thought of rectal examination, and there I found a worm. This shows that we ought to examine our cases more than carefully.

In no type of surgery do we meet as many emergencies, and for this reason we have a mortality of 50 to 60 per cent. If we could guard against emergencies we could ask for aid from the X-Ray laboratory. But when we are forced to go into an acute abdomen in an emergency we are running up our mortality.

Dr. H. B. Gessner (New Orleans): Doctor Ellis has very properly laid stress on the importance of early diagnosis. There are two factors that I have found helpful in making early diagnosis to which I would like to call your attention. One is the history of a previous operation, and the other is the presence of hernia. Quite a proportion of our cases of obstruction follow previous operation. We operate for acute appendix, possibly for abscess with many adhesions, and a year or two afterwards we find signs of beginning obstruction. The history of previous operation in a case like that is very useful.

Another condition which I have met several times in the last few months is hernia. When we see a patient with early signs of obstruction it is a good thing to inquire into the presence of hernia. Sometimes patients with hernia do not think much about it even when it becomes strangulated and causes symptoms. In some cases the hernia is internal, in which case, of course, we cannot be sure of the condition. But sometimes there is an external hernia to which the patient pays no attention. I saw a case like that within the last few weeks—the patient, a man about 60, was steadily hiccoughing and vomiting. He had no distension. Examination showed he had a femoral hernia which had been present twenty years, but was not giving him any conscious trouble. Exploration showed a strangulation of the hernia, and through the inguinal method of approach a gangrenous bowel was exposed and resected. I believe if we bear in mind the history, with reference to operation, and the presence of hernia, it will help us quite often in making an early diagnosis.

As to the one-horse surgeon in the one-horse town with a one-horse hospital—one of them has just paid a glowing tribute to another. Perhaps it will be of greater importance for one who lives in a large city to pay tribute to the surgeon of the smaller place. We who live in New Orleans know that all the way from Shreveport on the north, to Lake Charles on the west, and Baton Rouge on the east, there are small towns from 3,000 up that have hospitals in which excellent work is being done, and I take great pleasure in paying tribute to the good work that is being done by men like Doctor Ellis and Doctor Crawford and others whom I could name.

Dr. D. I. Hirsch (Monroe): Here is another one-horse surgeon. I have been unfortunate in having a good many of these cases. I will make the statement that in most cases a diagnosis of obstruction can be made within twenty-four hours. There is no subject as poorly handled in the textbooks on surgery as intestinal obstruction. If you bear in mind what happens when you have obstruction you will soon see that diagnosis can be made. The classification of obstruction is bad. We may classify it this way: First, you have obstruction; second, strangulation; third, thrombosis, and fourth, ileus. Obstruction is simply mechanical; strangulation is interference with the circulation; thrombosis is the formation of a clot, and ileus is paralysis of the gut. You may have obstruction for twelve to twenty-four hours in which you do not get strangulation or any abdominal reaction; no rigidity, but some pain and vomiting. Then if you have strangulation the abdomen reacts. With thrombosis you get a quick reaction and the abdomen is rigid. Ileus is due generally to peritonitis.

Great attention should be paid to the history, but the laboratory is not of much value in the diagnosis of obstruction. There are a few points in the diagnosis of obstruction that it might be well to bear in mind. If the pain is near the umbilicus, if you watch you will see a peristaltic wave go up to a certain point and stop. Another thing is enemas. There is nothing I know of that will give more data than enemas, if you watch them yourself and do not take anybody's word as to the nature of the stools. Another sign is pressure. Deep pressure on the abdomen will frequently relieve the pain for twenty minutes. Sometimes the obstruction is so tight that you get a severe strangulation immediately and you relieve the pain with deep pressure. With a thrombus you get acute, sudden pain, rigid abdomen, early vomiting and high leukocyte count.

Dr. Guy A. Shaw (Loreauville): The one-horse surgeon has had his say, and now comes the general practitioner. I had a case ten days ago that came from Port Arthur, a woman 57 years of age whom I had treated before. I reduced a strangulated umbilical hernia two years ago. As she had recovered from it she came back to me now. Three weeks before she came she had severe pain in the abdomen and commenced to vomit. She continued to vomit and retained nothing at all during this time. She was brought to me in an automobile three weeks afterwards and of course was in a desperate condition. She was very stout. I at once diagnosed obstruction. There was no evidence at the umbilicus of anything, though a tumor could be felt below. There was no time to be lost, so I opened the abdomen under local anaesthesia and we found there quite a tumor, as large as my two fists. The omentum surrounding it was thickened to almost ⅝ of an inch and there was an angle of intestine caught in there. I dissected out the omentum to free the intestine and found it necrosed in that one spot, so I turned under a fold and stitched it to the bowel and back and she made a very good recovery. She said the next morning she felt better than since her operation. That was due to reducing the strangulated hernia—the whole thing had been returned, but the omentum had caught the intestine. She said that ever since the first operation she had not been well, that she often felt pain, although there was no other symptom.

Dr. Daniel N. Silverman (New Orleans): In some cases there may be such a thing as prophylaxis of intestinal obstruction—such cases as gall stones and certain congenital malformations. I want to mention one case of congenital malformation with late symptoms. This man was 40 years old and had had his symptoms for one year. These symptoms were similar to those we find in peptic ulcer. His pain came on three and a half hours after eating, releived by alkolia and thinking it was peptic ulcer I sent him to Dr. Menville, and much to my surprise he reported a right diaphragmatic hernia involving the transverse colon distal to the hepatic flexure. Evidently this was just the beginning of an obstruction. It is of interest also because the right diaphragm is the first to close, and because of the position of the liver, right diaphragmatic hernias are quite unusual. This case may illustrate prophylaxis of intestinal obstruction.

Dr. T. J. Fleming (Mansfield): Just one word on the diagnosis, and that is to note the facial expression. Some cases of obstruction have no muscle rigidity, that is early, and one of the first things you notice is the facial expression. That is one of my main diagnostic points. You get no rigidity, but you notice the drawn, anxious, facial expression.

Another point I wish to stress a little more is the second stage operation. My first four cases were operated and three of them died in the one stage operation, the other finally got well, but it left her with a big hernia because it was a pus tube case and I had to operate in the section of the infected area. Since then every case I have had, I do a high jejunostomy, put in 16 French catheter, doing that under local. It is done in a few minutes and the patient is not conscious of any pain at all. Put them on a 5 per cent, glucose solution and alternate with soda by the Murphy drip through jejunostomy tube. This relieves them of the toxins. I leave in the catheter in these cases 5 to 9 days. It relieves the distension and the band that is forming will give way and you have to go back for the 2nd stage of the operation but seldom. Two of my cases were this kind, and the third one I took out the tube on the 9th day. The patient was able to be up and about ready to go home. Then he got his second attack of obstruction, and then I went in and did a radical operation in a clean field as the ruptered appendix wound had healed and released the band and he went home in fine shape.

Dr. Thos. B. Sellers, (New Orleans): Dr. Gessner spoke of the importance of a history of a previous operation in making a diagnosis of an intestinal obstruction.

I have in mind a case that Dr. Parham and I

handled. Mr. H. age 50, family history negative. Past history: usual diseases of childhood, typhoid and yellow fever. Stomach trouble twelve years ago and continued until operated on ten year ago (posterior gastro-enterostomy).

Present illness: Began vomiting rather suddenly just after dinner about 8 p.m., associated with severe abdominal distress. At first he vomited ordinary stomach contents, mixed with bile. About one hour later he began to vomit blood in large quantities, mixed with bile. The abdomen was scaffoid instead of being distended, unable to palpate a mass. Very little tenderness over abdomen, slight rigidity in upper portion. Very good results were obtained from repeated enemas (gas and fecal matter). Repeated hot gastric lavage was given; also 5 per cent calcium chloride was given intra-venously, but did not stop the patient from vomiting blood.

After about 24 hours observation we decided to explore the abdomen. A tentative diagnosis of the obstruction of the jejunum was made. We found several feet of the upper portion of the jejunum had herniated through the opening into the lesser cavity. (Made for the posterior gastro-enterostomy).

Dr. E. M. Ellis(closing): I wish especially to thank the doctors for their kind discussion of this paper, especially Doctors Crawford and Gessner and their very kind reference to the one-horse hospital.

I purposely left out in this paper many of the causes that might be referred to in regard to the etiology, such as postoperative hernias, etc., because a paper of this nature, dealing as it does with a subject of such magnitude, can only touch the high spots and bring out discussion to keep this vital subject before the doctors everywhere in the country, that they may be on the alert for all acute abdominal conditions which every day are taking such heavy toll of life. If I have done that, I think the paper will have served its purpose.

THE TREATMENT OF STRICTURE OF THE URETHRA.*

A. NELKEN, M. D.
NEW ORLEANS.

Stricture of the urethra is today a rarer condition than it was in the days of Thompson and Otis. This is due in part to the fact that we have discontinued the use of strong solutions of nitrate of silver and of zinc and lead salts in the treatment of urethritis, but chiefly, I am convinced, because we no longer rely, as most of our predecessors in urology did, on internal medication in the treatment of this condition. Rather, we control the discharge from the incipiency of the attack with local injections of mild solutions of permangante of potash, the organic silver salts or other similarly non-irritating drugs. As a result, urethral stricture rarely occurs save in neglected or mistreated cases of gonorrheal urethritis.

While stricture following localized chronic inflammation is the common type, there are other classes of urethral stricture that are seen often enough to require mention. Congenital stricture sufficiently severe to give rise to urinary obstruction is comparitively rare and is usually associated with hyposadias or other deformity of the genitals. Such strictures are usually located in the pendulous urethra and should not be confused with a rarer congenital deformity that produces a somewhat similar train of symptoms—namely, congenital valves in the posterior urethra. Traumatic stricture, as its name indicates, follows injury. After severe trauma, where there has been much damage to the urethra and peri-urethral tissues, the subsequent production of dense scar tissue offers many difficulties in the maintaining of a permanent and adequate urethral lumen.

The so-called "spadmodic stricture" I will mention only to dismiss. That urethral spasm can persist long enough to cause more than temporary retention of urine is contrary to my experience.

There are many types and degrees of urethral stricture: soft strictures and hard strictures, to say nothing of the elastic strictures that recontract almost as soon as the sound is withdrawn; so-called "strictures of large calibre" that are often not strictures at all but merely points of normal narrowing; filiform strictures, which, as their name indicates, are so tortuous or so tight as to offer difficulties in the passing of the smallest guide; and impermeable strictures, where the urethral lumen has been entirely obliterated. In addition, the stricture band may be a narrow ring of scar tissue obstructing the urethral lumen or it may be a dense infiltrating mass involving both the urethra and the peri-urethral tissues.

The present day teaching as to the proper management of strictures of the urethra is that operation should be resorted to only in cases where the passage of dilating instruments is not possible in spite of most patient effort,—a *dernier ressort*, in fact. This is largely a reaction from the abuses that followed the general acceptance by surgeons of the teachings of F. S. Otis. Otis was a forceful and an enthusiastic teacher and writer. In season and out, he preached

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the cutting of urethral strictures rather than the treatment by means of dilatation. His disciples took up his teachings with enthusiasm if not with discrimination. Cutting of urethrae, both contracted and normal soon became the fashion not only for the cure of urethral stricture, but likewise for all chronic urethral discharges. Otis taught that all gleets were due to stricture and the cutting operation was a certain and rapid cure. It was inevitable that a reaction should set in against this orgy of urethrotomies, a reaction which still persists, to a point where dilatation is often employed in the treatment of strictures where operative interference would seem to be clearly indicated.

In determining the indications for treatment of urethral stricture, there are a number of points that must be borne in mind. Other things being equal, strictures of the pendulous urethra should be treated by dilatation rather than by cutting. For one thing, internal urethrotomy, which is the operation applicable to strictures in this location, is not as satisfactory an operation as is external urethrotomy. The tendency to re-contraction is greater after internal urethrotomy and deformity of the penis with troublesome curvature of the organ is sometimes seen following the scar that comes from too free incision of the cavernous bodies. Strictures of the pendulous urethra usually do not offer the same difficulties in the passage of instruments as does tight strictures of the bulbous urethra, and, because of the absence of dense periurethral infiltration, such as is not uncommon in the perineal type of stricture, is more amenable to dilatation.

Soft strictures, no matter where located, that dilate readily and without undue reaction, should not be operated upon. I would, however, markedly broaden the scope of operative indications for strictures in general. Where instrumentation is followed by excessive bleeding or by septic chills and fever .operation should be done. Strictures that offer repeated difficulties to the passage of instruments should be operated upon. Strictures that will not dilate beyond a certain minimal degree or strictures that contract rapidly after dilatation, should be operated upon. Strictures in patients that are inclined to be negligent or in patients that avoid treatment because of fear of pain should be treated by operation, I would go even further and say that for strictures of the perineal urethra that do not come within the category of "soft strictures dilating readily," as mentioned above, operation rather than dilatation should be the procedure of choice.

External urethrotomy, with a guide, and with the use of local anesthesia, is as simple as is the passage of a sound and as safe. zii of a 5 per cent solution of procain is injected into the anterior urethra and retained by means of a clamp for 15 minutes. While waiting for anesthesia of the mucus membrane, the perineum is sterilized and the skin and tissues overlying the strictured portion of the urethra are infiltrated with 1-2 per cent procain solution to which has been added 4 drops of supra-renalin solution to each ounce of the procain. Then, the clamp being removed, a sound is passed from the meatus through the strictured area into the bladder. Where the passage of a sound is not possible, a filiform guide is passed through the stricture and a tunnelled sound threaded on the filiform until it is obstructed at the stricture. An incision is made through the skin and muscles down to and into the urethra, laying open the entire strictured area. The cut edges of the urethra are localized with guide sutures and the sound removed. Where a filiform is used, care must be exercised lest in incising the urethra, the filiform be cut across and the bladder end lost. This is not so serious an accident as it sounds, however, since the piece of filiform is easily removed from the bladder through the operating cystoscope at a later date.

External urethrotomy with a guide is one of the simplest of surgical procedures. Without a guide, the operation may be one of extreme difficulty. This difficulty consists of finding, in the dense mass of scar tissue that usually makes up this type of stricture, the bladder end of the urethral opening. I am not partial to the staining of the urethral tract by the preliminary injection into the urethra of some one of the aniline dyes. In using this method, the pressure necessary to force the dye into the bladder may likewise force it into any false tracts that are present, and even by rupture into the diseased tissues of the strictured area. Where we are compelled to operate without a guide, we have, in my opinion, one of the important indications for the use of local anesthesia. The incision having been made upon a sound introduced into the urethra down to and into the stricture, careful search is made for the bladder

end of the urethra. If it can not be located, the patient is requested to urinate. Usually the escaping urine will at once show us the urethral orifice. So important do I think is the assistance that the conscious patient can give in this way that, when, for any reason, local anesthesia can not be used, I resort to spinal anesthesia, under which the patient is still capable of voluntarily voiding. I have operated on many cases of impermeable urethral stricture, many of them with urinary extravasation, and I am glad to say that I have never yet been forced to open the bladder and do a retrogade catheterization because of inability to find the urethra at orifice.

The urethra having been opened, a no. 24 catheter is introduced into the bladder through the perineal wound and anchored with a silk-worm suture. A small catheter is then introduced from the meatus into the wound after the passage of a full-sized sound has assured us of the calibre of the urethra, and its ends joined. The perineal wound is then closed with cat-gut and silkworm in such a way as to bring the two catheters in contact and thus leave a minimum of open wound surface. In simple, uncomplicated cases, after three days, the catheters are withdrawn. Usually the patient will void through the perineal wound for a short time. Sometimes, he voids immediately through his meatus. His hospital stay need not necessarily be prolonged beyond the time of the removal of the catheters. Sounds should be passed in about a week and, in the majority of cases, repeated at constantly lengthening intervals in order to assure the patulousness of the canal. This last statement will be seized upon by those who advocate dilatation instead of operation as confessing the insuffiency of the surgical procedure. But the passage of large sounds after a properly performed external urethrotomy becomes a simple and painless process. In the large majority of cases it will be found that after a reasonable time further passage of sounds is unnecessary, the urethra showing no tendency to recontract. In others, sounds have to be passed only at long intervals, i.e. three or four times a year.

I have made no attempt in this brief paper to describe the less usual operations for urethral stricture such as excision of the strictured portion of the urethra or the extensive removal of scar tissue, as is sometimes required. Where these more elaborate procedures are indicated, all surgeons agree upon the necessity for some form of operative interference. What I hope to have shown is that in that large class of "borderline" cases, where it is a question of judgment to decide between instrumental and operative treatment, the simplicity and effectiveness of external urethrotomy should make it the procedure of choice.

DISCUSSION

Dr. M. H. Foster (Alexandria): With the paper as presented by Doctor Nelken I am happy to find myself in almost complete accord. It is certainly patent to most of us dealing with strictures that we do not see them with anything like the frequency of severaly years past.

The pathology being borne in mind, it is easy to tell which stricture will dilate and which will not. The pathology is not a hard and fast proposition, as to time of duration, but is based upon the progress of the fibrous tissue formation. This development varies within a period of 2 years, more or less. At first strictures are soft and pliable; later hard and unyielding. In the negro race the tendency is much more marked for hard fibrous tissue formation.

I do not recollect any mention by the essayist of using a soft, flexible bulbous bougie in making a diagnosis of stricture, and I have found it very valuable. If the size of the stricture is found to be less than 16 to 20 I never use a hard, rigid, instrument; it is much better to use a soft, flexible bougie.

As to the anaesthetic, you often see recommended the use of novocain or cocaine. This is conditionally wrong. Novocain is relatively inefficient for mucus membrane surface anaesthesia but cocaine is too dangerous to employ. Since using Butyn I do not see where novocain or cocaine should be used in intra-ureteral anesthesia.

In regard to drainage, after external urethrotomy a very useful suggestion has been made by Doctor J. Rilus Eastman of Indianapolis. After making the external uretheral incision, having completed the operation, the catheter is left in the bladder and brought out through the perineal wound and attached with catgut to another catheter lying in the pendulous urethra, the two catheters lying at right angles, and the external catheter is not so apt to be lost.

The proportion of strictures which should be subjected to operative measures on the one hand, to those which should be reserved for non-operative treatment on the other, is somewhat variable, and is dependent upon several circumstances. I believe that more than 90 per cent should be relieved by gradual dilatation, and that less than 10 per cent will require surgical intervention.

Dr. Paul Gelpi (New Orleans): Dortor Nelken has very clearly described the subject of his paper. I do not believe uretherotomy is used ar frequently as in the past, but to my mind there are very clear indications for external uretherotomy, whether anterior or posterior. One is in the anterior urethra where the element of time has to be taken into consideration, where there is no response to palliatives, and in the so-called elastic stricture. If the urine is in good condition I do not hesitate to perform a uretherotomy on the posterior urethra, but in those cases I leave the catheter in ten to twenty-four hours, with a triple

object in view. First of all, to check the blood; second, to allow the wound to be well covered with plasma and in that way to keep the urine from coming in contact and causing uretheral chill.

As to external uretherotomy, I think the indications are clear cut. If we have urinary fistula, if we have a great deal of induration in the perineum, and especially if we have a septic stump, I think the indications are unreliable.

Contrary to what my friend, Dr. Nelken, does, I do not use local analgesia. I use spinal analgesia, and my reason is that very frequently there is less reaction, and this facilitates the operation.

Where there is dribbling of urine these cases ought to be operated at once, because there is danger of extravasation.

I enjoyed Doctor Nelken's paper very much. I believe that the indications are usually clear cut, and where they are we should not hesitate.

FACTORS IN HALITOSIS FROM THE GASTRO-ENTEROLOGICAL STANDPOINT.*

A. L. LEVIN, M. D.
NEW ORLEANS.

It may seem strange to select for our consideration the subject of halitosis or offensive breath. We are accustomed to direct our attention to symptoms which express definitely serious changes in the mechanism of the human machine; such as pain, loss in weight, blood or tissue changes and similar phenomena. An individual presenting a history of bad breath and nothing else is usually met with a sense of luke-warm sympathy and is quickly dismissed with a dose of calomel, tooth brush advice or a mouth wash, and sent off with a note to the specialists of the oral cavity. It is too simple a phenomenon and does not signify danger, consequently it is filed away as a case of minor importance.

Offensive breath is regarded by many writers as a mirror reflecting diseases of the mouth, nose, pharynx, larynx, lungs, gastro-intestinal tract, renal and nervous systems, and metabolic disturbances. This paper deals exclusively with factors found in the gastro-intestinal tract based on a careful study of each case in co-operation with the specialists of the oral cavity. The cases which I will describe will clearly demonstrate that it is rarely excusable for a physician to minimize the history of offensive breath, especially in chronic cases which cause the afflicted a real sense of distress. The gastro-enterologist finds as his guide on the subject, a generalized statement in textbooks, "Among the numerous causes of halitosis are oral sepsis, dyspepsia and constipation." In order to correct such an abnormality, we must first understand how it is produced. Why do we so often see cases with marked oral sepsis, dyspepsia and constipation who do not suffer from halitosis? Again, we see quite often sufferers from halitosis with practically no evidence of oral sepsis, dyspepsia or constipation. Are the factors, oral sepsis, dyspepsia and constipation similar in their chemical action? Do they act as a disturbing element in liver function? Is disturbed liver function a vital factor in halitosis? As long as we do not know how it is produced, it is impossible to attempt its correction. We can probably find an answer to the above questions and have a clearer analysis of facts from the writings of Rolleston, Heyd, Killian, Lederer, Deaver and others.

Rolleston calls our attention to a rather characteristic offensive breath which is found in cirrhosis of the liver. It resembles the smell of dried and decomposing blood. It is probably due to a failure of antitoxic function of the liver and a consequent passage into the blood of poisons generated in the alimentary canal. Hence, it is a bad omen. This bad omen, expressed by Rolleston, is certainly worthy of our attention. Cirrhosis of the liver is more common than we actually realize. It is not necessary for fairly well developed cirrhosis of the liver to have marked symptoms. It has been demonstrated that one of the outstanding features of the liver, aside from its many specific functions, is its ability to regenerate itself. The hepatic regeneration which takes place is sufficient to carry on liver function, even in well advanced cirrhosis. Bassler found that during 1914, in 321 laparotomies, there were 39 cases of definite cirrhotic liver changes. In another group of 2567 laparotomies, there were 221 cases of cirrhosis, or about 8 per cent. While speaking of liver cirrhosis, very interesting facts are clearly emphasized by Heyd and Killian, concerning the liver and its relation to chronic abdominal infection. We can summarize the facts as follows:

(a) That the mesenteric venous blood is surcharged with products of absorption from stomach, duodenum, pancreas, small intestines, and the major portion of the large intestine.

*Read before the Orleans Parish Medical Society, December 8th, 1924.

(b) That under normal conditions, the liver possesses a marked depurative and detoxifying power whereby noxious byproducts from the gastro-intestinal tract, from cellular activity in general, or from bacteria, are rendered inert or harmless.

(c) That bacteria are constantly passing into the system from the intestines and from various other points and are destroyed in the mesenteric and other lymph nodes, and in the tissues. With the bacterial destruction, there is a liberation of toxins which produce a low grade chemical irritation resulting in degeneration of liver cells.

(d) That the frequent association of gall bladder disease with histologic evidence of liver degeneration is a foregone conclusion. Marked liver changes have also been observed in associated pathology of the appendix and ulcer or carcinoma of the stomach.

Lederer summarizes in a few well expressed phrases the manifold factors producing halitosis, thus—"Any condition which will alter the character of the gases entering the lungs through the capillaries of the pulmonary arteries." He divides the various types into two classes, (1) those in which the contamination of the breath takes place after the gases enter the lungs and (2) those in which the contamination of the gases takes place in the system before they enter the lungs.

Bearing in mind the above facts, we can safely reason that halitosis is the result of a gaseous absorption into the blood stream of bacterial toxins; that oral sepsis is not necessarily a primary factor. It is possible that the contamination of the liver through the abdominal viscera takes place first; the liver thus gradually loses its protective function by the constant inflow of a contaminated portal circulation, which passes the liver on its way to the lungs, the product of bacterial decomposition constantly passes through the large exit, the oral cavity. A favorable atmosphere is thereby created for bacteria and fungi to grow and develop. The coated tongue is not the result of poor mastication, as we were taught, but the reflector of a contaminated sewerage system (biliary apparatus). Halitosis, in our gastro-intestinal group of cases, in my opinion, speaks for a clinical manifestation of a biliary toxemia. Oral sepsis, dyspepsia and constipation are but contributing factors in destroying liver function; once that has been accomplished, halitosis is nature's warning signal of a disturbed important function in the human machine, as much as pain is a reminder of the development of a serious condition.

The gastro-enterologist usually meets the following types of sufferers from halitosis, namely.

(1) The early type of biliary toxemia, easily relieved by washing through the sewerage system.

(2) The type bordering on more or less permanency with suspicious tissue changes.

(3) The incurable type with definite tissue destruction and loss of protective liver function.

I have selected from my records cases to represent each group.

Case 1. J. M., male, 21, occupation clerical, consulted me first on November 20, 1922. Complaint—Fetor oris past 3 years. P. H. Tonsillectomy 2 years ago for same trouble. No relief. Teeth carefully examined with negative results. No nasal, antrum or sinus infection. P. I. Fetor oris especially marked about 3 hours after supper. Symptoms of indigestion very slight. Experiences very seldom a slight cramp in the upper abdomen and on one or two occasions he was nauseated and had temperature of about 100. History of definite cold at that time. Bowels are regular. No tobacco or alcohol. Denies venereal disease. Physical examination negative except for heavy coated tongue and mild acneform eruption on the face. Gastric analysis.—Empty stomach reveals excessive mucus, bile at end of lavage, no food residue, HCL present. One hour test—quantity normal, free HCL 37, TA 56, bile none, mucus normal. Urine—Indican three plus, trace of bile, otherwise negative. Chemical examination of saliva—Acetic acid 0.2, HCL trace. X-ray G. I. tract—Probably cholecystitis. Treatment—Dietary and medicinal regime along the lines of biliary toxemia. Fetor oris markedly improved. Patient did not return until November 20, 1924. Same trouble since he neglected to observe the dietary regulations. He has been put on the same treatment. Quick relief followed.

This case evidently belongs to group 1, in which the biliary toxemia can easily be corrected, but disregarding proper advice, he may eventually fall into group two or three.

Case II. Patient was referred to me in Oct., 1923 from the E.N.T. specialist with the following note: "This patient has been suffering from a bad breath and a bad taste in her mouth for some time. Her X-ray plates show a hyper-plastic sphenoiditis, but I am not convinced that this is the cause of her complaint." History of case. Female, 36, one child age 13. Complaint—Bad breath and bad taste for over a year. P. H. Five year ago appendectomy and ventral fixation of uterus. Present illness—On two occasions, recently, has been nauseated, she ascribes it to error in diet. There is a slight tendency to constipation. Symptoms of indigestion very slight. Suffers from backache. What worries her most is bad breath and bad taste in her mouth which is not relieved by treatment along lines of oral infection. Physical examination negative. Urine negative. Blood Wasserman negative. Blood picture—Hemo. 75 per cent, otherwise normal.

Gastric analysis—Achylia. This test has been repeated at various intervals with same results. Patient has been put on a mixture of HCL, pepsin and gastrone; proper diet was outlined. The relief was instantaneous, she is well ever since. She is still taking from time to time the acid mixture.

This case belongs to group II, there are evidences of tissue changes, the HCL factor is evidently a bactericidal and diminishes bacterial absorption into the portal circulation.

Case III. Female, age 39, referred for epigastric pain and constant taste of blood since a spell of hematemesis six months prior.

History—Gastrosuccorrhea for past 8 or 10 years; from half to a cupful of gastric juice is regurgitated 2 or 3 times a week, or sometimes daily. Six months ago, hematemesis followed by tarry stool for 14 days. Since then, she has a constant taste of blood which makes her sick; she also suffers from epigastric pain having a direct relationship to food. Bowels are constipated, stools tarry. Lost considerably in weight. No history of pulmonary involvement. Past history—Eight years ago appendectomy, salpingectomy and partial oophorectomy. Menopause last two years. Exam.—Pale and enemic, eyes react to L. and A., no glandular adenopathy, oral cavity negative, lungs negative, abdomen—reveals a definite sore spot about two inches above umbilicus and a corresponding sore spot in the back. Urine negative except for four plus indican. Gastric analysis—Slight hyperacidity, occult blood positive. Stool—Positive occult blood. X-rays made twice with negative findings for malignancy or ulcer. But in spite of this, patient was put on a strict ulcer treatment. Her epigastric pain has disappeared, and the taste of blood vanished entirely. She has gained in weight and was able to resume her work.

This case represents definite tissue changes and the odor of blood is either direct or indirect by absorption through liver route.

Case IV. Male, age 35. First consulted me on May 6, 1921, for a nasty taste in his mouth, a very offensive breath and a heavily coated tongue. He gave a history that 2 years prior, he was operated for a ruptured appendix, since then he has been suffering from the usual symptoms of indigestion, but his greatest discomfort is halitosis. His tongue is always coated and he can always detect an order of rotten eggs; he scrapes his tongue four times a day and uses all sorts of mouth washes without any relief. Exam.—Sallow skin, heavily coated tongue and a palpable liver edge. Laboratory report—Blood Wassermann negative, urine negative. Gastric analysis, one hour and fractional—Definite subacidity. Duodenal intubation reveals definite gall bladder infection; the bile was dark brown with great excess of debris, numerous epithelial cells and occasional pus cells. He was given a fair trial of treatment at the hospital using non-surgical biliary drainage. About 18 duodenal intubations were made but the bile never cleared up. He was and is on a well regulated diet. His oral cavity was carefully examined by both dentists and E.N.T. specialists. A tonsillectomy was advised but assurance of relief was not given. The E.N.T. specialist was a good prophet in this respect as tonsillectomy did not give relief. Autogenous vaccine was given without any results. Every imaginable remedy was tried with absolute failure. I advised a cholecystectomy or a prolonged cholecystostomy; but patient so far steadfastly refuses further operative interference.

This case unquestionably represents the third group, i.e. Halitosis dependent on a chronic biliary toxemia with loss of protective liver function.

Reviewing these and numerous other cases, I feel justified in reaching the following conclusions:

(1) That in a large number of our gastro-intestinal cases with halitosis, oral sepsis is not the primary factor.

(2) That halitosis is a warning signal, a reminder of a disturbed protective liver function.

(3) That a patient with halitosis should receive our most careful attention.

(4) That a co-operative spirit between the gastro-enterologist and the specialists of the oral cavity is very essential, in this type of cases.

(5) That achylia gastrica, liver cirrhosis, chronic cholecystitis, chronic pancreatitis, chronic appendicitis, peptic ulcer or carcinoma are often the factors of halitosis.

Bibliography

1. Lederer (Med. Rec. 73:58, 198).
2. Butler (The Diagnostics of Int. Med. N. Y., 1922, P. 231).
3. C. L. Green (Medical Diagnosis, 1922, p. 34).
4. French, H. (Index of Differential Diag. pp. 86-87, 1923).
5. Heyd, Killian & MacNeil, (The Liver & its Relation to Chr. Abd. Inf.)
6. Osler & McCrae. Vol. III, p. 42.
7. Deaver, J. B., (Some Surgical Relations of Cholecystitis. Annals of Surgery, May, 1924, pp. 726-729).

Dr. A. L. Levin (closing): For the present I have nothing more to add except to emphasize again, the importance of such a clinical manifestation as Halitosis. The more we study individuals who suffer from offensive breath, the more convinced we will become that a toxic agent is often generated within the intestinal tract, causing thereby a polution of the portal circulation. Non-interference with such a condition eventually leads to infection of the entire biliary tract.

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IODINE IN EXOPHTHALMIC GOITER

Until Plummer and Boothby[1] reported their experiences in the treatment of exophthalmic goiter in Lugol's solution, the administration of iodine in any form was considered as being absolutely contraindicated in this disease, notwithstanding the incontrovertible evidence of its value in the prevention and treatment of simple goiter. From these recent studies, however, which have been confirmed by investigators in all parts of the world, it now appears that the untoward effects which caused it to be discarded for many years, were in a large measure, due to a lack of understanding of the physiology and the pathology of the thyroid. This recently acquired knowledge will enable internists and surgeons to use more discrimination in selecting the cases of Graves disease in which they use iodine and the results will probable be more encouraging than formerly.

A relationship between endemic goiter and iodine appears to have been recognized for years, and many believe that it was the unknown active principle in therapeutic concoctions which have been used for centuries in its treatment. The first authentic record[2] is found in the *Practica* which was written about 1170 by Roger, of the University of Salerno. He described both goiter and scrofula and recommended for their treatment the ashes of the sponge and seaweed. It was not known, however, that iodine was the active substance in these remedies until 1820, when Coindet,[3] a Swiss physician, published the results of his investigations, which showed that Iodine benefitted many patients with goiter. The next contribution of importance was in 1850 when Chatin,[4] a French chemist, wrote extensively of his studies of the amounts of iodine in the air, soil and water, and drew attention to the high incidence of endemic goiter and cretinism in localities where the amount was low, a fact so well recognized at the present time in the "goiter belts" of the world.

Iodine was used to some extent since, but because of the lack of knowledge, which was made available by later studies, it was used in many cases in which it was not indicated. The unfavorable results following in such cases raised a question of its value in the minds of many. This situation was clarified to some extent when Magnus-Levy[5] demonstrated that thyroid tissue had a powerful effect on the heat production in the body and Kendall[6] isolated, in a crystalline form, a compound of iodine which Bauman had previously recognized in 1895. This substance was found to contain 65 per cent iodine and was given the name "thyroxin." Up to this time it was believed that there was no necessary association or etiologic relation between exophthalmic goiter and simple goiter, which has also been referred to as endemic, epidemic, sporadic and physiologic or adolescent goiter. Plummer then made his epochmaking contribution, which, although it dealt mostly with the difference between the two thyrotoxic syndromes—adenomatous goiter with hyperthyroidism and exophthalmic goiter—it cleared up much concerning the above groups.

The first practical application of the use of iodine in the prevention of goiter on a large scale was in the prevention of goiter in fish, which was undertaken by Marine

[1]Plummer, H. S. and Boothby, W. M.: *Journ. Iowa State Med. Soc.*, 14:66 (February) 1924.

[2]Cited by Plummer and Boothby. *Ibid.*

[3]Coindet, A., *Ann de Chim. et Phys.*, 15:49 Cited by Fraser.

[4]Chatin, A. Soc. de Biol. 30, 352 (1850).

[5]Cited by Fraser.

[6]Cited by Fraser.

and Lenhart, in collaboration with the Pennsylvania State Fish and Game Commission at the state hatcheries at Shady Grove, Pennsylvania, in 1909. At this hatchery the presence of enlarged thyroids had become so serious that the question of abandoning the industry was under consideration. It was found that the condition was due to two factors—overcrowding and overfeeding with artificial food. Then it was found that the addition of iodine in a concentration as low as 1-1,000,000 to the water and food caused the goiters to disappear. This led to the demonstration on the school children of Akron, Ohio, which was begun in 1916 by Marine and Kimball.[7] In this study 3 grains of sodium iodide was given in the drinking water once each day for two weeks each spring and fall. Almost 10,000 girls were examined during the three years and approximately half of them elected to take the prophylactic treatment. Of those taking it, not a single normal girl developed thyroid enlargement or goiter, although two girls in poor health did develop small goiters. Among those not taking the iodine, 27.6 per cent of those without goiter at the beginning developed goiter, and many of them became quite large. This convincing evidence has been corroborated in all parts of the world until Marine's original dictum that *"Simple goiter is the easiest known disease to prevent"* is generally accepted.

This study, together with those of Magnus-Levy and of Kendall, reopened the question of the value of iodine in exopthalmic goiter. The first knowledge that this element would be beneficial in some cases came to light in a most unique way. It occurred when Trousseau[8] relieved a case when he inadvertently gave a patient with exopthalmic goiter tincture of iodine instead of tincture of digitalis. In reporting the episode, he says: "In the course of October, 1863, I was consulted by a young married woman who habitually resides in Paris. She was suffering from subacute exophthalmic goiter tincture of iodine in- of great size. When I examined her the first time, although I had let her rest for a long while, and, although I repeated the examination several times, and at sufficiently long intervals, so as to make sure that she was no longer under the influence. I still found her heart beat at the rate of 140 to 150 times a minute. I recommended hydrotherapy and I wished to administer at the same time tincture of digitalis, but preoccupied with the idea that there would be some danger in giving iodine, I wrote tincture of iodine instead of digitalis, so that the patient took 15 to 20 drops of iodine a day for a fortnight. When she returned to me, her pulse was 90. I found out my mistake and substituted tincture of digitalis for that of iodine but after a fortnight the pulse had again gone up to 150, so that I, at once, returned to iodine.

Experience subsequent to this case of Trousseau's taught that it not only failed to relieve the symptoms but in most instances it would exaggerate them. It remained for Plummer and Boothby to attack the problem in a modern way. These two investigators used *liquor iodi compositus* (Lugol's solution) in their studies because it is an aqueous solution of iodine (5 per cent) and potassium iodide (10 per cent) and, therefore, provides a large amount of iodine loosely combined with potassium. They found that ten drops, well diluted with water and followed by a half a glass of water, is, on an average, the optimal dose. They varied this dose in some instances but used it as the routine in most cases. In summarizing results from the use of this agent Plummer considers that a conservative estimate of the number of patients having exophthalmic goiter, so far treated with Lugol's solution, at the Mayo Clinic is six hundred. Thus far, no patient of this number, with an unquestioned exophthalmic goiter has been made worse by Lugol's solution. His series numbered forty-three cases which were intersively studied. Sixteen (37 per cent) improved markedly and promptly after the administration of iodine; fourteen (32 per cent) improved definitely; eleven improved slightly or no more than they would have after ordinary hospitalization or rest and two (5 per cent) were not affected. Starr, Walcott, Segal and Means,[9] Frasier,[10] Mason[11], Jagic and Spengler[12] and Read[13] have since reported similar results.

[7]Marine, D., and Kimball, O. P.; *J. Lab. and Clin. Med.*, 3:40 (1917); *Arch. Int. Med*, 22:41 (July 1918 and 25:661 (Feb.) 1920; *J. A. M. A.*, 73:1873 (Dec. 20) 1919.

[8]Cited by *International Medical Digest*, 6:198 (March) 1924.

[9]Starr, P., Walcott, H. P., Segall, J. and Means, J. H.; *Arch. Int. Med.* 34 :355 (Sept.) 1924.

[10]Fraser, F. R., *Brit. Med. Journ.*, 1; 1 (January 3) 1925.

[11]Mason, E. H., *Can. Med. Assoc. Journ.*, 14:219 (March) 1924.

[12]Jagic, N., and Spengler, G., *Wien. Klin. Woch.*, 37:116 (1924).

[13]Read, J. Marion *Endocrinology*, 8:746 (November) 1924.

As far as these studies have progressed, there are several observations that have been reported by all investigators. For example there seems to be a unanimity of opinion that the maximum benefit can only be obtained if the patient is hospitalized or is at rest in bed. Ambulatory cases, therefore, do not respond so well. They also agree that the dosage of iodine was too large in former experiments. Opinion seems to be general that iodine must be kept up for an indefinite period and any remission in its use must be very short for the reason that a rapid rise in the metabolic rate and an increase in the other toxic symptoms will occur within one or two weeks after it is discontinued. This naturally raises the question as to whether iodine can be considered as a definite medical treatment of exophthalmic goiter or as a means of improving a patient's condition preparatory to thyroidectomy. Time and further study alone will decide the first question but no doubt exists at the present time that a preliminary course of iodine so improves the physical condition of patients that they are far better surgical risks than before it was used. Indeed, the experience of many leading surgeons in the use of iodine in this way has been that not only has the preoperative and surgical mortality been reduced but the frequency of the typical postoperative hyperthyroid reaction resulting in death has been progressively decreased.

In any event, the rapidity with which the pulse and basal metabolic rate drops to normal levels in severe cases of exophthalmic goiter with coincident improvement in the general condition has been frequently spoken of as being remarkable, by some observers, in view of the fact that iodine had been so generally condemned for so many years as being one agent that would exaggerate the symptoms. It is, therefore, most fortunate for humanity that the investigators who are responsible for the reopening of this question, had the initiative, perseverence and courage to disregard former opinion and achieve what may prove to be the means of eliminating one of the most insidious diseases which attack man and animals.

HAY FEVER

George Piness, Los Angeles (*Journal A. M. A.*, Feb. 21, 1925), says that before one can undertake intelligently to diagnose and treat hay fever, one must have a sound botanic knowledge of the region in which the hay fever to be treated occurs. To obtain this information, it is necessary to make a complete survey of the flora in this particular locality, a chart being kept on which are noted the various pollen bearing plants, their season of pollination, the dates of the first and last pollination, their genera, and whether they are air-borne or insect pollinating. The technic of pollen collecting, as carried on by Piness is described and also the preparation of pollen extracts. It has been his experience in his vicinity that at least 87 per cent of hay fever sufferers are multiply sensitive, which makes it almost impossible to treat with a single pollen extract as suggested by Walker, who believes that the maximum injection should consist of from 2,000 to 2,500 pollen units, and others who assert that 1,400 units is sufficient. Owing to this frequency of multiple sensitivity, it has been the author's rule to incorporate never more than three pollens in a single antigen, but to prepare as many antigen as are necessary to meet the patient's needs. The initial dosage is best determined by the reactions obtained by testing with the various dilutions of the pollen antigen with which the patient is to be treated. The 202 cases in this study were not only followed through an entire course of preseasonal desensitization, but each of them, at the end of their normal hay fever season, was either seen in person or answered a questionaire relative to the results obtained. Multiple sensitization has been the rule rather than the exception in the hay fevers of the Southwest.

Of the entire group, only forty-one, or 2.02 per cent, gave reactions to only a single pollen. The remainder were sensitive to from three to fifteen pollens. Treatment based on the assumption of group reactions would not be satisfactory as treatment based on the use of pollens to which the patient is actually sensitive, the reason for this being that patients who showed multiple sensitization gave reactions to pollens of various genera. Piness' results compare favorably with those quoted by others. Sixty patients obtained complete relief of their symptoms. Eighty-one patients obtained practically complete relief, meaning that they were free of symptoms to such a degree that it was possible for them to go about their every-day duties with very little if any discomfort, and required no local treatment during their hay fever season; 44 patients were relieved of the severity of their symptoms to the extent of at least

50 per cent, as compared with that of former years, meaning that the severity of the attacks was lessened, the duration was shorter, and the symptoms were not severe enough to prevent them from carrying on their daily duties. Seventeen patients obtained no relief whatever, and in one or two instances symptoms were aggravated by the treatment. Reactions incident to treatment occurred most frequently in the patients who obtained the greatest amount of relief.

CORRESPONDENCE

New Orleans, Feb. 26, 1925.

To the Editorial Staff,
My Dear Friends:

Though I have verbally expressed to Drs. Walther and Talbot, and other members of your staff, my appreciation of the extraordinary favor shown me by the *New Orleans Medical and Surgical Journal*, in devoting so large a part of its editorial columns to my praise, on the occasion of my election to the Presidency of the American College of Surgeons, I realize the inadequacy of any verbal message to express my sentiment of grateful appreciation.

I now wish to confirm and emphasize, in a more permanent form, the sentiments of gratefulness and warm friendship that I entertain for your good selves,—for you, personally and individually, and for the *New Orleans Medical and Surgical Journal* as the object of your labor and enterprise. Your over generous praise has touched me deeply,—far more than I am able to express by any formal message of thanks.

This public manifestation of your approval, appearing at the end of forty-five years of an arduous professional life,—thirty-five of which have been devoted, in large part, to the teaching of medical students,—coming to me, as it does, from men the majority of whom I may claim as my former pupils, and all as my friends and confreres,—fills me with a joy and gratitude that surpasses all the honors and distinctions that I mave have received in this country or abroad. In fact, none of these, no matter how highly prized, can possess any real importance or significance without the hearty approval and commendation of my professional fellows and the people with whom I have been associated all my life.

Whatever merit my professional career may possess, it is necessarily associated with the inheritance and the environment from which I have sprung, and, in this sense, I feel that whatever praise or honors are bestowed upon me, they properly attach to and are shared by the profession, the institutions and the community, of which I am only a part.

Allow me to add to my heartfelt thanks for all your kindness to me, a word of warm congratulation on the splendid success which the *Journal* has attained as the official organ of the State Medical Associations of Louisiana and Mississippi. The *Journal* is now one of the strongest pillars upon which the Parish and State Society rests. The activity and efficiency displayed in its editorial management, backed by a steadily increasing volume of contributions of a superior quality that reflect the progress accomplished by our medical societies, have given it a stability and a power that it never had before. As a former editor, interested collaborator, and contributor to its pages for the last forty years, I rejoice at your success, and I am the more pleased that so much of this success is due to the generous, brilliant and unselfish efforts of the younger men whom I am happy to recognize as my former students and always my friends. Cordially yours,

RUDOLPH MATAS.

MISSISSIPPI STATE MEDICAL ASSOCIATION

ANNOUNCEMENT OF ANNUAL MEETING

The fifty-eighth annual session of the Mississippi State Medical Association will meet in the First National Bank Auditorium, Biloxi, at 9:30, on the morning of May 12th, 1925, President J. J. Haralson presiding.

The first meeting of the House of Delegates will be at eight o'clock the same morning, Tuesday, May 12th. All local secretaries should send at once to the office of the state secretary and names of all accredited delegates so that there may be no confusion as to representation. This is important.

The Harrison-Stone Society and the profession of Biloxi are arranging an unusually attractive program of entertainment. Dinner-dances and boat trips out on the Gulf are among the things mentioned as "other than scientific."

During May the Gulf Coast is always at its best. The sun is not too hot to make boating and sea-bathing unpleasant. In fact, it is just right. If you have not experienced a plunge into the salt waters of Biloxi with the May breezes fanning you, you have in store a real treat and a happy surprise. If you want to fish Folkes will furnish you with a line and hook.

The scientific program has not been yet prepared for the printer, but will be in the May issue of the *Journal*.

A new State Board of Health will be nominated at this meeting, in accord with the recent Mississippi law governing the appointment of same.

Two national highways run through Biloxi, the old Spanish Trail and the Magnolia Route, so that it is easily accessible from any part of the state. Go in your car and fill it up with your professional neighbors. You will find the drives out of Biloxi the very finest anywhere.

The following are a few of the hotels of Biloxi: The White House, Buena Vista, Belmar, Avon, Biloxi, Kennedy, Riviera, Avelez. The Hotel Avelez will be headquarters. Make your reservations early as we will have four hundred at this meeting.

The average May temperature at Biloxi for a period of ten consecutive years is 75° F. This will give you an idea as to what kind of clothes to bring in addition to your bathing suit.

Plan to bring your wife with you. The Woman's Auxiliary will have an interesting program, and many outing trips are planned for the ladies.

Headquarters, Avelez Hotel, Biloxi, Miss.
General Meeting Place—First National Bank Auditorium
General Meeting—First Day
Tuesday, May 12, 1925
Session 9:30 a.m. to 12 m.; 1:30 p.m. to 4 p.m.
Opening Exercises

1. Call to order, President J. J. Haralson, Forest
2. Invocation .....Rev. E. A. DeMiller, Biloxi
3. Report Committee on Arrangements.

SCIENTIFIC PROGRAM

Evening Session—Tuesday, May 12, 1925
To Which the Public is Invited
First National Bank Auditorium

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1. Invocation .....Rev. O. S. Lewis, Biloxi
2. Addresses of Welcome:
   On Behalf of the City of Biloxi—Mayor J. J. Kennedy
   On Behalf of the Harrison-Stone Medical Society—H. M. Folkes, M. D.

General Meeting—Second Day
Wednesday, May 13, 1925
Session 9 a.m. to 12 m.; 1:30 p.m. to 4 p.m.

Wednesday Evening—Dinner-Dance, 7 p.m.
Buena Vista Hotel

General Meeting—Third Day
Thursday, May 14, 1925
Session 9 a.m. to 12 m.; 1:30 p.m. to 4 p.m.
Boat Ride

Section on Eye, Ear, Nose and Throat Will Meet at Hotel Avelez

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Woman's Auxiliary Will Meet at the Hotel Riviera
Tuesday, 10 a.m.

PROGRAM OF SECOND ANNUAL MEETING OF THE WOMAN'S AUXILIARY OF THE MISSISSIPPI MEDICAL ASSOCIATION, BILOXI, MISS.
MAY 12, 13, 14, 1925

Tuesday, May 12:

8:00 A. M. Registration—Lobby of Avelez Hotel. Wives of doctors will be given opportunity of membership in the State Auxiliary by payment of the 1924-25 dues of $1.00. (This privilege is extended only to those living in unorganized counties.)

3:30 P. M. Meeting of Executive Board—Sun parlor of Riviera Hotel, Mrs. D. J. Williams, state president, presiding.

Wednesday, May 12:

First Open Session—Mrs. D. J. Williams, state president, presiding.

9:30 A.M.—Call to order.
Invocation.
Address of welcome: On behalf of Woman's Auxiliary of the Harrison-Stone County Medical Society—Dr. Margaret Caraway, Gulfport.
On behalf of the City of Biloxi—Mrs. G. F. Carroll, Biloxi.
Response to addresses—Mrs. H. R. Shands, Jackson.
Roll call of state officers and councilors.
Roll call of auxiliaries.
Appointment of courtesy, resolution and nominating committees.
Report of councilors.
Report of treasurer—Mrs. W. D. McCalip.
Report of corresponding secretary—Dr. Margaret Caraway.
Report of secretary—Mrs. J. M. Acker, Jr.
Report of chairman public health—Mrs. Henry Boswell.
Report of county auxiliaries (report to be made by the president or delegate).
Address, "The Value of a Woman's Auxiliary to the County Medical Society," Dr. F. J. Underwood, Jackson.
12 O'clock—Adjournment.
12:30 P.M., Riviera Hotel—Mrs. H. S. Hairston, president-elect, presiding.
Report of meeting of Woman's Auxiliary of the American Medical Association, Mrs. S. W. Johnston, Vicksburg.
Report of organization of Woman's Auxiliary of Southern Medical Association, New Orleans, La.—Mrs. D. J. Williams.
(Guests of the luncheon on Wednesday and Thursday will make reservations at the registration desk.)

Wednesday, May 13:

2:00 P. M.—All members and visitors assemble on gallery of Riviera Hotel for a motor drive of 27 miles along the beach, stopping for tea at the picturesque "Inn-By-The-Sea," Pass Christian, Miss.

On return drive the guests will be given an opportunity to see the "Dixie White House," where Woodrow Wilson wintered, the Great Southern Hotel and other attractions in and near Gulfport, including "Beauvoir," the home of Jefferson Davis.

8:00 P. M.—Dinner-Dance—Buena Vista Hotel, Biloxi, for Medical Association and Auxiliary.

Thursday, May 14:

8:30 to 10:30—Sight-seeing in and about Biloxi.

10:30—Second Session, Mrs. S. W. Johnston, presiding.
Invocation.
Reading of minutes.
Report of Resolutions Committee.
Report of Courtesy Committee.
Report of Nominating Committee.
Election of officers.
Unfinished business.
Address—Dr. Henry Boswell, "How May Woman's Auxiliaries Assist the Sanatorium."
12 O'clock—Adjournment.
12:30 P.M.—Luncheon—Mrs. C. A. Sheely, presiding.
2:00 P. M.—Boat ride for doctors and wives.

MEDICAL ECONOMICS

Chas. A. Bahn, M.D., Department Editor.

MEDICAL ECONOMICS

PART 8.

Are you essentially a doctor to the masses or a doctor to the classes?

If you are at heart a doctor to the masses, you really feel that all your patients are human beings like yourself—nothing more, nothing less. You believe that the hod carrier and the bank president are equals so far as your professional services are concerned. You think that your patients seek medical service primarily to get well and happy with a minimum expense of time and money; that your duty lies in the co-ordination of your knowledge of health, disease, and human beings, with the patient's health problem. You know that it is your duty to give every patient a big dollar's worth of real value in health restoration for every dollar that you charge, and thus, having earned your dollar, you realize that it is best for the patient and yourself that you be paid promptly because of every dollar that you earn, you receive only about forty cents net, which is necessary to keep you and yours in the present and future physical and mental health, comforts, and happiness, which is essential to serve efficiently those who need you. You feel that your real medical standing is proportionate to the number of persons that you efficiently serve. You realize that the more practically you conduct your practice, the more value you can give your patients, for that part of their income which is paid to you, because waste, extravagance and loss in medical practice must be paid for primarily by the doctor's family and patients, and at a very high rate. You gladly give a reasonable amount of your efforts to those who cannot pay, realizing, however, that where all do not pay equally, those who pay, must pay for those who do not pay.

If you are a doctor of the classes, you believe largely in personal service; you are essentially a one-man organization, everything from porter to president, to the smaller and possibly more select number of persons that you serve. Naturally, you have to draw presidents' salary for doing less technical work, which, unfortunately, has to be done. In other words, you don't believe in delegating the less difficult part of your work to others under your supervision and responsibility in order to save the patients time and money. You probably believe, that certain patients should have the right of way because of social and financial position, rather than because of medical emergency. Your charges are probably based more or less on what the traffic will bear, because you feel that certain patients are entitled to special privileges and naturally that they should pay for these privileges. You probably charge a large part of your earnings, because the class of patients you serve often do not transact their affairs on a cash and carry basis. The attendant cost of bookkeeping, etc., to say nothing of the loss sustained by unpaid bills, naturally have to be paid for by those who actually do contribute financially. Generally speaking, in medical practice, a dollar cash has the same value as a dollar and a half charged.

Of course, most of us do not entirely belong in one class or the other, but each of us has a distinct tendency in one direction or the other. It is important that you understand yourself.

The demand for the Rolls-Royce is just as legitimate as the demand for the Ford. One does not compete with the other, because they cater to entirely different buyers, between which extremes there are numberless gradations that, in principle, lean one way or the other.

Unfortunately our office practice is essentially conducted for the classes. It is rather difficult for the man with a family and an income of about two to four thousand dollars per year to get satisfactory office medical attention, if at all complicated without relatively great expense. Among the reasons are the rather great cost usually attended with medical practice at the present time, and medical buck passing. We are prone often to pass along from doctor to doctor our difficult medical problems, rather than work them ourselves as fully as possible, with a minimum time and expense to the patient. This is especially true, when the ailment is apparently purely functional, that is where an organic explanation is hard to find for the patient's symptoms. Someone has well defined an ophthalmic term, Amblyopia, " a condition in which the patient does not see, neither does the doctor."

In our varied and somewhat complicated

classification of disease, it is so easy to lose sight of the fact that many of our patients with purely subjective symptoms, not accounted for even by the most thorough objective examinations, are just plain tired. Their fatigue often results from circumstances beyond their control and often from prolonged incorrect physical or mental living.

Speaking about fatigue, did it ever occur to you that the first symptom of fatigue, and incidentally of most diseases, is, in one form or another, over sensitiveness and irritability? This often means that our mental machinery, working under forced draft, does not correctly interpret what our senses perceive. Our steering wheels are not keeping us in the middle of the road and our brains make mountains of molehills, and the reverse. Each of us has a fatigue point beyond which we will break down in one form or another.

Our neurasthenic patients are very often fundamentally normal persons like ourselves, who are paying for their faulty living and lack of understanding in pain and physical limitation in one form or another. Because we cannot see, hear, nor feel the cause of pain or other disfunction, it does not follow that they do not exist.

When we are tired our jobs are too big for us. It is especially at that time that fatigues, side partners, *fear* and *worry*, sap vitality? These are indirectly the greatest causes of disease and ill health. When we are healthy and happy, most diseases do not attack us. Our immunity is at its greatest.

The old idea of working very long hours in fundamentally wrong. It is just as necessary to stop work on time as it is to start on time, the important thing is to really work when you work and play when you play. If you cannot do a day's work in eight hours you probably cannot do it at all. The person who dissipates in play is probably really better off than one who dissipates in work, because the former is at least more rested.

As physicians, our primary duty is to teach others how to live, and unless we are healthy and happy this is impossible. That this thought is as old as time is proven by the time-aged adage, "Physician, cure thyself."

Drugs never have, and never will take the place of corrective living. Think that over.

It is, therefore, of prime importance, Mister Doctor, that you keep healthy and happy, because otherwise you cannot perform your full duty. One cannot teach others to do what one really does not know how to do by actual practice.

Ask yourself these questions; am I over sensitive or irritable in other words, am I probably tired? This often means that you do not know how to live, because if you did, you probably would not buy pain, ill health, and limitation, with your life's blood any more than you would lead nickels with your dollars.

To be a really successful physician, you must be healthy and happy because you are selling health and happiness. You must be a producer and not a parasite, physically, mentally and morally. To accomplish this, you must conduct your practice in a reasonably practical way in order to provide for the rest, healthy recreation, and play which is just as necessary as work. You must be saving enough to provide for you and yours when the sun goes down and the public has ceased, as ultimately it must, to buy the knowledge and service which you have for sale.

In order to earn net a thousand dollars a year in the practice of medicine, generally speaking, you will have to charge, on an average, one dollar per hour for your time. Thus, if you expect to earn ten thousand dollars per year net, you must make your time worth, on an average, ten dollars an hour to the patient who has to work for his income, probably as hard as you do for yours.

Address all communications to Dr. Chas. A. Bahn, 1551 Canal St., New Orleans, La.

NEWS AND COMMENT

Lucien A. Ledoux, M. D., Department Editor

"Every man owes some of his time to the upbuilding of the profession to which he belongs."—Theodore Roosevelt.

LOUISIANA STATE MEDICAL SOCIETY MEETING

Our president, Dr. C. V. Unsworth, has asked that it be announced that all meetings of the House of Delegates, also the meetings of the Scientific Session of the Convention will be called to order on time as specified in the program. Your co-operation in this regard is earnestly requested, so that the sessions of the House and the Scientific Session may not be delayed and will be completed as planned.

As you will observe, we have a very large program, and it will be only by strict punctuality and adherence to time limits of papers and discussions that we will be able to complete same.

PLAN OF ENTERTAINMENT

Tuesday, April 21, 1925—Luncheon, 12:00 p.m., Hotel Dieu.

Thursday, April 23, 1925—Luncheon, 12:00 p.m., Tulane Medical College.

Tuesday, April 21st, 1925, 8:00 p.m., Elks' Home.

President's Address—Dr. C. V. Unsworth.

Annual Orator.

A dance will follow. This is tendered by the local profession to the membership of the Louisiana State Medical Society. The Committee on Arrangements again urge the out-of-town members to bring their wives and daughters. The dance at the Elks will be a gala occasion. It will furnish the means of a social "get-together."

Wednesday, April 22nd, there will be a stag smoker. A modern Lucullus—in the person of Paul Gelpi—is a positive guarantee that the heavens, sea and earth will be made to contribute their share in making this function a memorable one.

With the record-breaking attendance of the recent Southern Medical Association still fresh in our minds, we expect the State Society meeting of 1925 to be a red letter year in its history.

HOTELS

The Roosevelt Hotel will be official headquarters for the Louisiana State Medical Society Convention.

HEADQUARTERS

Tulane Medical School, 1551 Canal Street, Hutchinson Memorial. (Walking distance from any of the hotels).

All mail addressed in care of Convention will be taken care of at Registration Office, and a daily notice will be posted of letters and telegrams received.

Information Bureau in Registration Office.

All those desiring to contribute scientific exhibits for the Annual Meeting of the Louisiana State Medical Society should get in touch with Dr. Foster M. Johns, chairman. Your prompt attention is earnestly requested.

MONTHLY BULLETIN OF THE SHREVEPORT MEDICAL SOCIETY, MARCH

March meeting of the Shreveport Medical Society, March 3rd, at Charity Hospital, at 8 p.m.

"Let us know each other better."

MARCH SCIENTIFIC PROGRAM

Adenoids and Tonsils in Relation to General Health, by Dr. E. C. Simonton. To open discussion, Drs. Boaz, L. W. Gorton, Picard.

Clinical Case, Dr. D. L. Kerlin.

Clinical, Dr. W. J. Norfleet.

Charity Hospital, February 3rd, 1925.

The Shreveport Medical Society was called to order at 8:05 by President Sanderson. Fifty members were present.

Minutes of the last meeting were read and approved.

For the Memorial Committee Dr. J. D. Young read the resolutions draw up by his committee commemorating the death of Dr. W. M. Adams, who died on January 29th, 1925. A report was made, seconded and passed, that the resolutions be adopted by the Society and the resolutions spread upon the minutes of the Society and a copy be sent to the family of the late Dr. Adams.

Dr. Sanderson reported a talk he had with the director of the Shreveport Federated Charities. A motion was made, seconded and passed, that the Society participate in the work. Cards were distributed for pledges.

Written applications were received from Drs. S. H. Betts, D. R. McIntyre, and G. W. Murphy, each accompanied with six dollars for 1925 dues. These applications were referred to committees as follows: Drs. Crain, Ragan, Knighton on Dr. Betts' application; Drs. Hendrick, Lloyd and Douglas, on Dr. McIntyre's; Dr. J. D. Young, Abramson, Stamper, on Dr. Murphy's application.

SCIENTIFIC PROGRAM

The Society was extremely fortunate in having Dr. Victor C. Vaughan, past president of the American Medical Association and a member of the International Health Board, address us. Dr. Vaughan's subject was Notable Achievements of the Medical Profession During 1924.

Following the address Dr. Vaughan was given a rising vote of thanks.

Discussing Dr. Vaughan's talk were Drs. Sanderson, Herold, Winn, Lucas, Bodenheimer, Rougon, Thomas, Caldwell, Barrow and Scales.

Under clinical cases Dr. Boyce presented a case showing an especially large tumor mass of the neck with a miscroscopic section diagnosis of spindle cell sarcoma, duration one year and showing no metastesis. Discussion by Dr. Barrow.

On motion the Society adjourned, after one of the most interesting meetings we had had.

ROBT. T. LUCAS, Secretary.

TERREBONNE PARISH MEDICAL SOCIETY

Terrebonne Parish Medical Society recently

held a meeting, at which time the following officers for 1925 were elected:

President, Dr. R. W. Collins, Houma; vice-president, Dr. J. B. Duval, Houma; secretary-treasurer, Dr. P. E. Parker, Houma; delegate, Dr. T. I. St. Martin, Houma; alternate, Dr. H. P. St. Martin, Houma.

VERMILION PARISH MEDICAL SOCIETY

The Vermilion Parish Medical Society on March 3rd elected the following officers for 1925:

President, Dr. H. A. Eldredge, Abbeville; vice-president, Dr. Thomas Latiolais, Kaplan; secretary-treasurer, Dr. A. Landry, Delcambre; delegate, Dr. Thomas Latiolais; alternate, Dr. A. Landry.

WASHINGTON PARISH MEDICAL SOCIETY

The Washington Parish Medical Society held its February meeting at the Pine Tree Inn, Bogalusa, February 26th, 1925.

Luncheon was served from 8:00 to 9:00 P. M., after which the meeting was called to order and the regular order of procedure followed.

The scientific program consisted of the following papers and discussions, viz:

"Gastric Ulcer Perforating," by Dr. E. E. Lafferty. Discussion opened by Drs. Roberts and Herrin.

"Pyelitis," by Dr. R. R. Ward, Bogalusa. Discussion opened by Drs. Stringfield and Davidson.

"Water and Health," by Dr. F. Michael Smith. Discussion opened by Drs. Slaughter and McNeese.

TANGIPAHOA PARISH MEDICAL SOCIETY

The monthly meeting of the Tangipahoa Parish Medical Society was held at Amite, Louisiana, Monday, March 9th, at 8 p.m.

The scientific program was preceded by a supper, which was served at Thompson's Cafe, with Dr. E. M. Robards, president, presiding, and Dr. Alfred Lewis, secretary. The program contributed by the invited guests was as follows:

"Some Comments Regarding Present Day Obstetrical Practice," by Dr. Lucien LeDoux, New Orleans.

"Amebic Dysentery and its Treatment with Stovarsol," by Dr. Foster M. Johns, of New Orleans.

A short business session followed. The application of Dr. E. Kittering, of Loranger, Louisiana, was submitted, and the applicant elected by acclamation.

Before adjourning, Ponchatoula was chosen as the next meeting place, at which time the annual election of officers will be held.

AMERICAN COLLEGE OF SURGEONS

A sectional meeting of the American College of Surgeons was held in Mobile, Alabama, on February 13-14, at which the states of Alabama, Florida, Georgia, Louisiana and Mississippi were represented. The first day was devoted to the discussion of Hospital Standardization and Hospital Problems. The hospital standardization movement was presented by Dr. Allen Craig, of Chicago, director of state and provincial activities, American College of Surgeons; Hospital Efficiency, from the standpoint of the Internist, by Dr. Lee W. Roe, Mobile, Ala., senior Internist of the City Hospital, representing the American College of Physicians; The Patient, the Doctor and the Hospital, by Rev. C. E. Moulinier, Milwaukee, president of the Catholic Hospital Association of America; Some Things that Hospital Standardization has Accomplished, by Arch C. Cree, general superintendent Georgia Baptist Hospital, representing the American Protestant Hospital Association.

The conference on hospital standardization was presided over by Dr. Edgar P. Hogan, of Birmingham, Alabama.

A Round Table Conference was conducted under the chairmanship of Dr. M. T. MacEachern, of Chicago, director hospital activities, American College of Surgeons, in which the leading representatives of the most important hospitals and medical institutions of the Gulf States participated.

On the evening of February 13th, a public meeting was held, Dr. E. P. Hogan presiding, which crowded the Scottish Rite Cathedral with a large, select and most representative audience. Addresses were delivered by Dr. Allen Craig, of Chicago, on "The American College of Surgeons and the Public;" by Dr. M. T. MacEachern, of Chicago, on "Efficient Hospitals,—Illustrated;" by Dr. W. C. MacCarty, pathologist of the Mayo Clinic, Rochester, Minnesota, on "What You Should Know About Cancer," and by the Reverend C. E. Moulinier on "The Healing of the Sick."

The exercises were closed by a most interesting series of motion pictures under the heading, "How the Fires of the Body are Fed."

The meeting was a great success,—addresses and exhibits were much appreciated by the audience.

The social side of the conference was no less delightful and included a most enjoyable boat ride and delicious luncheon. Too much praise cannot be given the committee in charge of all arrangements,—scientific and hospitable,—to whose personal efforts the success of the gathering is largely due.

Among the Louisiana and Mississippi physicians in attendance upon the conference, the following were noted:

Drs. Matas, Urban Maes, C. G. Cole, J. R. Spellman, R. E. Stone Lynch, New Orleans; Dr. J. C. Willis, Shreveport; Dr. L. B. Crawford, Patterson; Dr. J. L. Wilson, Alexandria; Dr. J. U. Graves, Monroe; Dr. J. B. Chamberlain, Baton Rouge. Of Mississippi—Dr. W. B. Dobson, Dr. H. R. Shands, Dr. J. W. Barksdale, Dr. A. E. Gordon, Dr. David Walley, Dr. W. W. Crawford, Dr. Chas. Chamberlain, Dr. B. B. Martin, Dr. P. H. McLean, Dr. E. C. Parker, Dr. H. A. Gamble, Dr. S. H. Hairston, Dr. C. C. Hightower, Dr. L. B. Hudson.

On the evening of Monday, March 2, 1925, a lecture was delivered by Dr. Rudolph Matas in Cincinnati by invitation of the Academy of Medicine of that city under the presidency of Dr. John Chapman Oliver.

The subject of the address was "Immediate and End Results in the Operative Treatment of Aneurisms by the Author's Methods (Endoaneurismorrhaphy)." The lecture being profusely illustrated with lantern slides, might have been designated as a Stereopticon Clinic on Aneurism.

There was a large attendance of distinguished

members and representatives of the medical profession and their appreciation of the lecturer was shown by a rising vote of thanks.

ILLINOIS CLINICAL CLUB

A group of physicians and surgeons, residing in Springfield, Illinois, and its vicinity, visited in New Orleans on Monday, March 9th, and remained in the city until the following Wednesday afternoon. The party consisted of about thirty medical men and women, under the leadership of Dr. Don Deal and Dr. C. P. Sloan, of Bloomington, Illinois. Arrangements for the reception of the club in New Orleans had been made by Dr. Rudolph Matas.

On Monday, after visiting Charity Hospital and later enjoying the historic features of the vieux carre, they were entertained by the Orleans Parish Medical Society, where the privileges of the floor were given to the visitors. On Tuesday, they were entertained at Touro Infirmary,—witnessing operations in the morning, in which all the members of the surgical staff participated, and after luncheon in the afternoon were kept busy with an excellent medical program under the direction of Dr. I. I. Lemann. On Wednesday, they visited Hotel Dieu, where an excellent medical and surgical program was prepared by the staff, under the direction of Dr. Homer Dupuy. Wednesday evening the visitors were entertained at a supper given by Dr. J. T. Nix, Jr., at the Nix Clinic.

AMERICAN HEART ASSOCIATION

The first annual meeting of the American Heart Association was held at the New York Academy of Medicine, Monday afternoon, February 2nd, 1925. Dr. Lewis A. Conner, the president, reviewed briefly the progress of the development of the Association and commented on the need for such an organization and the widespread interest which its formation had developed.

At a meeting of the Board of Directors immediately following the annual meeting, the following officers were elected:

President, Dr. Lewis A. Conner; vice president, Dr. James Herrick; secretary, Dr. Robert H. Halsey; treasurer, Dr. Paul D. White; executive secretary, Miss M. L. Woughter.

RADIO SERVICE FAR REACHING

For three years the Public Health Service has operated a Health Information by Radio Service, consisting of weekly lectures on timely health topics. A total of forty-seven stations are now co-operating in this work.

Surgeon-General Cumming was agreeably surprised recently to receive a letter from the chairman of the Health Week Committee of Jerusalem, Palestine, which read in part as follows:

"Several of your talks on public health which were prepared for broadcasting were made use of during our recent health campaign. In the name of the Executive Committee of Health Week, I wish to thank you for these talks, which are very instructive."

The "Truth Serum" (scopolamin-apomorphia) is a success, it is claimed at the convention of the Eastern Society of Anesthetists. This drug, to make the people tell the truth whether they want to or not, is a humane form of third degree.

The maternal death rate among the industrial policy holders of the Metropolitan Life Insurance Company declined during 1924, according to the company's statistical bulletin. Deaths from puerperal septicemia or child-bed fever dropped to 6.6 per 100,000, the lowest figures ever recorded for the women insured in the company's industrial department. The declining death rate from this disease is due to some extent, at least, the report states, to more and better nursing before and after confinement and to better delivery service in the hospital and home.

The National Committee for Mental Hygiene has added two new medical members to its staff, Dr. George K. Pratt, as assistant to the medical director, and Dr. Ralph P. Truitt, as director of the division on the prevention of delinquency, to succeed Dr. Victor V. Anderson, resigned.

Whooping cough causes a greater number of deaths in Denmark than any other infectious disease. Danish physicians and scientists therefore have devoted much time to the study of this disease. Dr. Thorwald Madsen, of the Danish Serotherapeutic Institute, lecturing at Harvard, said that the institute has perfected a means of establishing a diagnosis of the disease in its early stages. Its studies have also show that after five or six weeks practically no whooping cough bacilli are found. As a result, Danish children are now kept from school only four weeks after the beginning of the spasmodic cough. A whooping cough serum was found to have little preventive effect, but vaccination was found to lighten the infection and decrease the mortality to a considerable degree.

Mexico will soon establish a Federal Children's Bureau with local branches throughout the country, according to the provisions of a recent decree.

THE AMERICAN BOARD OF OTOLARNGOLOGY

The American Board of Otolaryngology will hold its first examination during the meeting of the American Medical Association in Atlantic City, May 25th to 28th.

According to the rules of the Board, applicants are divided into three classes.

Class I. Those who have practiced Otolaryngology ten years or more.

Class II. Those who have practiced Otolaryngology five years and less than ten years.

Class III. Those who have practiced Otolaryngology less than five years.

The type of examination is different for each class. The secretary, Dr. H. W. Loeb, announces that thus far over three hundred applications have been made.

AMERICAN SOCIETY FOR THE CONTROL OF CANCER

Annual Meeting, March 7, 1925

The date for holding the annual meeting is fixed by law as the first Saturday in March. This falls on March 7. The meeting will be held in the offices of the Society, 370 Seventh Avenue, 16th floor, at 4 o'clock in the afternoon.

PUBLICATIONS RECEIVED

Lea & Febiger, Philadelphia and New York: "A text-book of Practical Therapeutics," by Hobart Amory Hare, B. Sc., M. D., LL. D. "William Crawford Gorgas, His Life and Work," by Marie D. Gorgas and Burton J. Hendrick.

W. B. Saunders Company, Philadelphia and London: "Phinciples of Surgery for Nurses," by M. S. Wolff, MA., B. Sc., M. R. C. S. (Eng.), L. R. C. P. "The Physiology of Mind," by Francis X. Dercum, A. M., M. D., Ph. D. "The Surgical Clinics of North America," December, 1924, Vol. 4, No. 6.

F. A. Davis Company, Philadelphia: "Feeding, Diet and the General Care of Children," by Albert J. Bell, A. B., M. D. "Clinical Medicine for Nurses," by Paul H. Ringer, A. B., M. D. "Clinical Therapeutics," by Alfred Martinet, M D. "A Laboratory Manual of Physiological Chemistry," by Elbert W. Rockwood, M. D., Ph. D., and Paul Reed Rockwood, M. D. "Pseudo-Appendicitis," by Thierry DeMartel and Edouard Antoine.

C. V. Mosby Company, St. Louis: "The Technic of Local Anesthesia," by Arthur E. Hertzler, A. M., M. D., Ph. D., LL. D., F. A. C. S.

Paul B. Hoeber, Inc., New York: "Association for Research in Nervous and Mental Disease," Vol. III, 1923.

The MacMillan Company, New York: "Medical Education," by Abraham Flexner.

The Year Book Publishers, Chicago: "The Practical Medicine Series," Vol. IV, Pediatrics, edited by Isaac A. Abt, M. D.

Miscellaneous: "International Conference on Health Problems in Tropical America, 1924." "Consultations du Medecin Practicien," by Le Dr. Fred Blanchod.

REPRINTS

"The Intensive Radiotherapy of Cancer, Is It a New Method?," by A. Joseph Riviere, M. D., Paris. "An Oriental Bacteriologic Research on Pruritus of the Perineum," by J. F. Montague, M. D. "Des Nodosites Juxta-Articulaires," by E. Jeanselme.

Notice

The New Orleans Ophthalmological and Oto-laryngological Society will hold clinical meeting on April 23rd at 8:00 P. M. The different eye, ear, nose and throat doctors of New Orleans will present cases, and a most interesting program will be provided. Those interested in these specialties are cordially urged and invited to attend.

The meeting will be held at the Eye, Ear, Nose and Throat Hospital.

DR. JULES DUPUY, Chairman of Meeting.

DR. VAL FUCHS, Secretary.

DR. T. J. DIMITRY, President.